COUNTY BOROUGH OF BOOTLE.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR

1933

F. T. H. WOOD, O.B.E., M.D. (Lond.), B.S., B.Sc., D.P.H.

Medical Officer of Health, School Medical Officer, Medical Officer to the Public Assistance Committee, etc.

BOOTLE:
BOOTLE TIMES, LTD., 30, ORIEL ROAD.

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CONTENTS.

BOOTLE TOWN COUNCIL 1932-1933.

†*His Worship the Mayor (Mr. Alderman Scott).

Mr. Alderman Barbour, J.P.
Mr. Alderman Booth, J.P.
Mr. Alderman Eaton.
Mr. Alderman Gardner, J.P.
Mr. Alderman Harris.
†Mr. Alderman Hughes.
Mr. Alderman Johnston, J.P.
Mr. Alderman King, J.P.
Mr. Alderman Patrick, J.P.
§*Mr. Alderman Turner, J.P., M.A., M.D.
Mr. Alderman Wolfenden.
Mr. Councillor A. E. Abbott.
Mr. Councillor J. H. Abbott.
†§*Mrs. Councillor Ballantyne.
†*Mr. Councillor Baucher.
Mr. Councillor D. B. Black.
Mr. Councillor R. A. Black.
Mr. Councillor Burnie.
†§*Mr. Councillor H. O. Cullen.
Mr. Councillor N. Cullen.
†§*Mr. Councillor Fairlie.
Mr. Councillor Hackett.
§*Mr. Councillor Hankey.
Mr. Councillor Harris.
†Mr. Councillor Haworth, J.P.
Mr. Councillor Holden.
†*Mr. Councillor Hughes.
Mr. Councillor Jones, J.P.
Mr. Councillor Keenan.
Mr. Councillor D. Kelly.
Mr. Councillor J. S. Kelly.
†§*Mr. Councillor Kinley.
*Mr. Councillor Lawton.
Mr. Councillor Maguire, J.P.
†Mr. Councillor Mahon.
Mr. Councillor Marsh.
Mr. Councillor O'Neill.
§*Mr. Councillor Redding.
Mr. Councillor Riley.
†§*Mr. Councillor Roberts.
Mr. Councillor Rogers.
Mr. Councillor W. C. Scott.
Mr. Councillor Smith.
Mr. Councillor Spence.
†Mr. Councillor Spencer.
Mr. Councillor Stewart.
Mr. Councillor Webster.

* Member of Health Committee.
§ Member of Maternity and Child Welfare Sub-Committee.
† Member of Housing and Town Planning Committee.

HEALTH COMMITTEE.

Chairman—Mr. Alderman Turner.
Deputy Chairman—Mr. Councillor Fairlie.

MATERNITY AND CHILD WELFARE SUB-COMMITTEE.

Chairman—Mr. Alderman Turner.
Deputy-Chairman—Mrs. Councillor Ballantyne.

This Committee consisted of members of the Health Committee (as indicated), together with co-opted members as follows:—

Mr. Councillor O'Neill; Mrs. E. H. Smith, J.P.;
Mrs. J. Mulhern; Mrs. J. Eaton.

HOUSING AND TOWN PLANNING COMMITTEE.

Chairman—Mr. Councillor Baucher.
Deputy-Chairman—Mr. Councillor H. O. Cullen.

STAFF OF THE PUBLIC HEALTH DEPARTMENT.

Medical Officer of Health, Administrative Tuberculosis Officer, and Medical Superintendent of the Corporation Hospitals—
F. T. H. Wood, O.B.E., M.D., B.S., B.Sc. (Lond.), D.P.H. (Durh.).

Tuberculosis Officer and Deputy Medical Officer of Health—
R. Hannah, M.C., M.B., Ch.B. (Edin.), D.P.H.

Assistant School Medical Officers and Assistant Medical Officers of Health—
G. P. McCloskey, M.B., B.Ch., B.A.O. (Belf.), D.P.H.
Miss M. B. Clarke, M.B., Ch.B., D.P.H. (Liverpool).

School Dental Surgeons—
H. B. Dawes, L.D.S. L. W. Smith, L.D.S. (part-time).

Corporation Hospital, Linacre Lane.

Matron—Miss S. L. Bevan.

Maghull Sanatorium.

Matron—Miss E. Holden, R.R.C.

Maternity Home.

Matron—Miss M. W. Cleary.

Chief Sanitary Inspector, Inspector under the Food and Drugs Acts, and the Housing Acts, etc.—
[12]J. C. Palmer, M.C.

Sanitary Inspectors—
[12]B. J. Holden. [1]W. Robson. [12]W. E. Leather. [12]A. D. H. Johnstone.

Chief Clerk—N. Lockwood.

Clerical Staff—
H. A. Brown, O.B.E. Miss Wilson. Miss Thompson. S. Astley. Miss Maxwell, Miss Brown. Miss Beattie. Miss Green. Miss Smith. H. E. Wright.

Vaccination Officer (Part-time)—R. W. Jackson.

Health Visitors—
[1]Mrs. McKowen. [345]Mrs. Meredith. [345]Miss F. M. Hughes.
[347]Miss Stark. [1347]Miss Skinner.
[347]Miss Wild. [347]Miss Lynch.

School Nurses—
[7]Miss A. Hughes. [7]Miss Thomas. [7]Miss Davies [7]Miss C. Hughes (Orthopaedics).

Tuberculosis Nurse—[7]Miss Kelly.

Part-time Officers.

Medical Officer, Ante-Natal Clinic	P. Malpas, F.R.C.S.
Medical Officer, Maghull Sanatorium	A. Hendry, M.D.
Medical Officers, Venereal Diseases Clinic	W. L. Webb, M.B., Ch.B. Miss R. Nicholson, M.B., D.P.H.
Ophthalmic Surgeon	E. Allan, M.B., Ch.B.
Throat Surgeon	C. Yorke, F.R.C.S.
Orthopaedic Surgeon	B. L. McFarland, M.D.
Medical Officer, Aural Clinic	I. A. Tumarkin, M.B., Ch.B., F.R.C.S.
Public Vaccinators (also District Medical Officers).	A. W. Hanlon, M.R.C.S., L.R.C.P. A. V. Glendinning, M.B., Ch.B.
Pathologist	Professor J. M. Beattie.
Analyst	W. H. Roberts, M.Sc., F.I.C.
Veterinary Surgeons	Henry Sumner, M.R.C.V.S. James Sumner, M.R.C.V.S.
Rat Officer	W. Borrows.

[1] Certified Sanitary Inspector. [2] Certified Inspector of Foods. [3] Certified Health Visitor.
[4] Certified Midwife. [5] Half-time Tuberculosis Visitor. [6] Assistant Inspector of Midwives.
[7] Trained Nurse.

Health Department,
Town Hall,
Bootle.
March 1934.

To the Mayor, Aldermen and Councillors
of the County Borough of Bootle.

Ladies and Gentlemen,

I have the honour to present the sixty-first Annual Report on the work of the Health Department.

Attention may be directed to the following features of interest during the year:—

(1) A fall in the birth-rate to 21·4 per 1,000 of the population.

(2) A small rise in the death-rate to 13·9 per 1,000 of the population, the rise being due to an increase in the respiratory death-rate in the first quarter of the year.

(3) A slight increase in the infantile mortality rate to 88 per 1,000 births.

(4) A continuance of the relatively low maternal mortality rate.

(5) A continuance of the high incidence of scarlet fever which was, however, of a mild type, and a lessening of the incidence of diphtheria.

(6) The opening of a new 12-bed cubicle pavilion at Linacre Hospital, which however proved insufficient to meet the demand for accommodation in the autumn.

(7) An increased call on the services of the District Medical Officers, necessitating the creation of a third District and the appointment of a third Medical Officer.

(8) Greater use of the Council's Maternity and Child Welfare Clinics as the result of the first complete year's working at the new Health Centre.

(9) The withdrawal of Exchequer subsidy for new housing provision and the consequent suspension of local activity on the completion of 77 more houses, making a total of 2,204 since the commencement of this work in 1920.

(10) Continuance with the programme of systematic inspection and repair of working-class houses, which is resulting in considerable additions to domestic convenience year by year.

It is with considerable pleasure that I again acknowledge my indebtedness to the members of the Health Committee, and in particular to the Committee's Chairman, Mr. Alderman Turner, and to his successor, Mr. Councillor Harris, for the reception given to recommendations made for the maintenance and development of public health work in the Borough. This opportunity is taken of expressing to Mr. Alderman Turner who, on his retirement from the Council in November, had completed twelve years' service in the Chairmanship of the Health Committee, the gratitude of the Department generally, and of myself especially, for the informed interest shown and the unobtrusive help given in the various extensions of this work which that term had seen.

In conclusion I would express appreciation of the continued good service of my colleagues in the Department.

I have the honour to be,

Your obedient servant,

F. T. H. WOOD,
Medical Officer of Health.

STATISTICAL SUMMARY FOR 1933.

Population (Registrar General's estimate) at mid-year 1933 ... 77,210
Area in Acres (exclusive of Dock Estate—337) 1,610
Population at Census of 1931 76,799

Census.	Per occupied dwelling.	
	No. of persons.	No. of families
1911	5·6	1·12
1921	5·6	1·17
1931	5·03	1·18

Inhabited houses (end of 1933) according to Rate Books ... 15,587
Uninhabited houses (end of 1933) according to Rate Books ... 135

	Total.	Males.	Females.		
Live Births—Legitimate ...	1,598	821	777		
Illegitimate ...	54	27	27		
Total ...	1,652	848	804	Birth Rate	21·4
Still Births, 76.	Rate per 1,000 total (live and still) births				43·7
Deaths	1,075			Death Rate	13·9

Number of women dying in, or in consequence of, childbirth—

	Deaths.	Rate per 1,000 total (live and still) births
From sepsis	2	1·15
From other causes ...	4	2·30

Death Rate of Infants under one year of age per 1,000 live births—Legitimate, 88; Illegitimate, 111; ... Total 88
Deaths from Measles (all ages) 11
Deaths from Whooping Cough (all ages) 13
Deaths from Diarrhoea (under 2 years of age)... 33
Death Rate from Respiratory Tuberculosis per 1,000... ... 1·33
Death Rate from all forms of Tuberculosis per 1,000... ... 1·50
Natural increase of the population during the year 577
Number of deaths of Infants (under the age of one year) ... 146

The Rateable Value of the Borough for 1933-34 was £489,989

A Penny Rate on the Borough Fund produced in 1933-34 ... £1,867

In 1933-34 the General Rate was 13/0d. in the pound (excluding water rate and charges).

The cost of the Health Services during 1933-34 is estimated at £31,733 approximately, equivalent to a rate of 1s. 5·02d. in the pound.

COUNTY BOROUGH OF BOOTLE.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH.

I.—VITAL STATISTICS.

Population.—At the Census in 1881 the population enumerated was 27,374; in 1891, 49,217; in 1901, 58,556; in 1911, 69,876; in 1921, 76,487; and in 1931, 76,799.

In April 1934, the Registrar-General intimated that his estimate of population at mid-year 1933 was **77,210,** and this figure has been used in calculation of statistics throughout this report.

Births.—During the year there were registered 1,652 births to Bootle parents, representing a birth-rate of **21·4 per 1,000** of the population, that for England and Wales being 14·4. In 1932 the Bootle birth-rate was 22·9 and for the decennium 1923-1932 it was 23·7. There were 848 males and 804 females. It will be noted that the birth-rate which reached a post-war maximum of 29·7 in the first quarter of 1920 and has since then progressively declined, except for checks in 1930 and in 1932, again shows a decrease. The fall in the national birth-rate, which has always been lower than that for Bootle, was also continued.

Period.	BOOTLE.		ENGLAND & WALES.
	Total Births.	Rate per 1,000.	Rate per 1,000.
1881—1890 ...	15,508	36·8	32·4
1891—1900 ...	17,716	33·2	29·9
1901—1910 ...	20,468	32·3	27·2
1911—1920 ...	20,748	27·6	21·8
1921—1925 ...	10,003	26·1	19·9
1926—1930 ...	8,881	23·2	16·7
1931 ...	1,667	21·6	15·8
1932 ...	1,768	22·9	15·3
1933 ...	1,652	21·4	14·4

The illegitimate births numbered 54, and were 3·3 per cent. of the total. In 1932 the total number was 62, and in 1931, 56.

Deaths.—The total number of deaths of Bootle residents during 1933, whether within or without the Borough, was 1,075; this figure includes 90 (excluding 56 deaths of "non-residents") who died in institutions within the Borough, 377 who died in transferred institutions in Liverpool, 48 who died in hospitals outside the Borough, and 10 who died in mental hospitals, making a total of 581 deaths in institutions. The death-rate for 1933 was, therefore, **13·9 per 1,000** of the population, as compared with 13·3 in 1932 and 14·8 in 1931. The increase in the death-rate was for the most part due to a higher mortality from respiratory diseases in the first quarter of the year.

The death-rate in Bootle for the decennium 1921-1930 was 13·5, and for 1911-1920, 17·1. The crude death-rate of the 118 great towns of England and Wales during 1933 was 12·3, compared with 11·8 in 1932. The table below demonstrates the general downward trend of both national and local rates since the beginning of the century.

Period.	BOOTLE.		England & Wales.
	Total Deaths.	Rate per 1,000.	Rate per 1,000.
1881—1890 . .	8,260	19·9	19·1
1891—1900 .	10,942	20·6	18·2
1901—1910 .	11,400	17·8	15·4
1911—1920 ...	12,470	17·1	14·3
1921—1925 ...	5,230	13·7	12·2
1926—1930 ...	5,106	13·3	12·1
1931 ...	1,140	14·8	12·3
1932 ...	1,027	13·3	12·0
1933 ...	1,075	13·9	12·3

The death rate during the first quarter of the year was 19·3, during the second, 11·7; the third, 9·9; and the fourth, 14·7.

The number of deaths which occurred in institutions was 581, *i.e.*, 54 per cent. of the total deaths, as compared with 55 per cent. in 1932.

Mortality in Relation to Sex.—There were 579 deaths of males, and 496 of females. This represents a male excess mortality of approximately 21·2 per cent. after allowing for the smaller proportion of males

in the population. The causes chiefly accounting for male excess are in order of importance, pneumonia, tuberculosis, violence, bronchitis and arterio-sclerosis.

Mortality in Relation to Old Age.—It is common knowledge that the population as a whole is ageing, which is merely another way of stating the fact that people are surviving until later ages. The following table demonstrates this fact, and shows that the number of people surviving to the age of 65 and over has increased to such an extent this century that 36·2 per cent. of the deaths in Bootle at the present day are of persons aged 65 or over, whereas in the first five years of this century the contribution to the general death-rate made by persons over 65 was only 14·8 per cent.

Period.	DEATHS.		Percentage over 65 Years.
	Total.	Over 65 Years.	
1901—1905 ...	5,671	849	14·8
1906—1910 ...	5,729	923	16·1
1911—1915 ...	6,259	1,197	19·1
1916—1920 ...	6,211	1,304	21·0
1921—1925 ...	5,230	1,352	25·8
1926—1930 ...	5,106	1,533	30·1
1931 ...	1,140	396	34·7
1932 ...	1,027	349	34·1
1933 ...	1,075	390	36·2

An examination of the ages at death of individuals in this age-group shows that there were 105 deaths at years 65 to 70, 113 deaths at years 70 to 75, 86 at years 75 to 80, 62 at years 80 to 85, 19 at years 85 to 90, 4 at years 90 to 95, and one at 95 years.

Infantile Mortality.—There were 146 deaths of infants, compared with 152 in 1932, 159 in 1931, and 141 in 1930. The infantile mortality rate was **88 per 1,000** births, compared with 86 in 1932, 95 in 1931, and 90·9 in the decennium of 1923-1932.

The rate of infantile mortality amongst males was 98, and amongst females 78. Throughout England and Wales the rate of infantile mortality was 64 per 1,000 births, and in the 118 great towns it was 67.

The great decline in the infantile mortality rate began substantially in the decennium 1901-1910, during which period active measures were first instituted to secure such a reduction. The following table has accordingly been prepared to demonstrate in terms of lives saved what in fact such a decline really means.

Deaths of Infants under One Year.

Years.	Actual recorded Deaths.	Number which would have been recorded had the rate of mortality observed over 1901-10* still prevailed.	Difference.
1911—1915 ...	1434	1596	— 162
1916—1920 ...	1031	1474	— 443
1921—1925 ...	912	1480	— 568
1926—1930 ...	793	1314	— 521
1931 ...	159	247	— 88
1932 ...	152	262	— 110
1933 ...	146	241	— 95

* Rate of mortality 1901-1910 was 148 per 1,000 births.

From the above table it will be seen that in the decennium 1921-1930 Bootle saved 1,089 infant lives over and above what it was saving in the relatively good decennium 1901-1910, with further savings of 88. 110, and 95 during the three subsequent years.

Thirty-seven children died before they were a week old, and a total of 57, or 39·0 per cent., of all the deaths under one year, occurred in children under the age of one month. This is a neo-natal mortality rate of 34·5 per 1,000.

Young Child Mortality.—In 1933 there were 80 deaths of children aged 1 to 5 years, as compared with 88 in 1932. The principal causes were—pneumonia 31, diarrhoea 9, diphtheria 7, whooping cough 6, measles 5, tuberculosis 4, meningitis 4, and violence 3.

Uncertified Deaths.—Seventy deaths (44 of residents and 26 of non-residents) were the subject of a Coroner's inquest, while in 35 cases the death was registered without certification by a medical man or a Coroner; this is equivalent to 3·3 per cent. of deaths uncertified.

CAUSES OF DEATH.

The causes of death, classified according to age, are shown in the table on page 69. It will be seen from the table that the principal certified causes of death were:—

Year 1933.	No. of Deaths.	Proportion per 1,000 Deaths	
		Bootle, 1933.	England & Wales, 1932.
Bronchitis, pneumonia and other respiratory diseases	236	220	113
Diseases of heart and circulation ...	132	123	264
Tuberculosis (all forms)	117	109	69
Cancer, malignant diseases	89	83	125
Epidemic diseases	83	77	31
Prematurity and congenital debility ...	49	46	34
Diseases of the nervous system	66	61	84
Violence	26	24	45

Epidemic Diseases.—The epidemic diseases (excluding influenza) were responsible for 83 deaths, as compared with the average of 76·6 during the preceding ten years. There were 11 deaths from measles as contrasted with 40 in 1932; 21 deaths from diphtheria, as against 13 in 1932; 13 deaths from whooping cough, as against 16; 2 deaths from scarlet fever, as against 5 in the previous year; and no deaths from enteric fever as against two in 1932. The deaths from diarrhoea and enteritis were 36, as against 26 during 1932; 33 were of children under two years of age.

Respiratory Diseases.—Owing to a small outbreak of influenza and to the inclement weather of the first quarter of the year, the death-rate from respiratory diseases reverted to the higher level of recent years. Pneumonia was responsible for 130 deaths, bronchitis for 89, and other respiratory diseases for 17, making the total deaths from respiratory diseases (excluding tuberculosis) 236, or 21·9 per cent. of the total deaths at all ages, as compared with 172, or or 16·7 per cent. in 1932. Influenza was entered as a cause of death in 19 cases, as against 8 in the preceding year.

The table below shows the seasonal nature of deaths from diseases of the respiratory system (excluding tuberculosis and influenza).

Month.	No. of Deaths.	Death-rate per 1,000 living.	Month.	No. of Deaths.	Death rate per 1,000 living.
January	60	0·78	July	5	0·06
February	25	0·32	August	8	0·10
March	32	0·41	September	8	0·10
April	12	0·16	October	13	0·17
May	11	0·14	November	23	0·30
June	11	0·14	December	28	0·36

Cancer.—Cancer was registered as the cause of death in 89 cases, as compared with 94 in the preceding year. This represents a cancer death-rate of 1·15 per 1,000 of the population as compared with 1·01 during the years 1911 to 1920, with 0·78 per 1,000 during the the first ten years of this century, and with 0·55 during the ten years 1891 to 1900.

ECONOMIC CONDITIONS.

Valuable information as to economic conditions having a bearing on the health of the town is obtained from data kindly supplied by the Clerk to the Public Assistance Committee, by the Managers of the three Employment Exchanges situate in Bootle, and by the Clerk to the Bootle Insurance Committee.

It appears that during the year 1933 £82,843 4s. 10d. was expended in outdoor relief, including £40,442 17s. 6d. to unemployment cases (comparable figures for 1932 were £64,999 and £24,765). Further, the annual return of persons in receipt of Poor Relief on the night of 1st January 1934 shows 431 persons to have been in receipt of institutional relief, of whom 72 were persons not suffering from sickness, accident, or bodily or mental infirmity, and 6,871 persons to have been in receipt of domiciliary relief, of whom 3,150 were relieved on account of unemployment. The total number of persons in receipt of Poor Relief on 31st December 1933 was equivalent to 941 per 10,000 of the population.

The average number of adult males on the "live" unemployed registers in the last week of each month during the year was estimated to be 6,926 as compared with 7,013 during 1932, and the average numbers of women and juveniles were 775 and 888 respectively, as

compared with 756 and 916 for 1932; it should be noted, however, that the figure for juveniles in 1933 includes an unknown number resident outside the Borough.

As regards National Health Insurance, the total number of insured persons in the Borough on 30th December 1933 was 31,927, or 40·1 per cent. of the total population. There was a further increase in the number of prescriptions made up during the year for the insured population. It will be recalled that this figure rose from 50,738 in 1921 to 146,128 in 1932, with a corresponding increase in the annual cost of medicines from £1,955 to £4,595 10s. 11d.; while this year the experience is 150,866 prescriptions at a cost of £4,718 2s. 9d.

II. GENERAL PUBLIC MEDICAL TREATMENT.

The control of the transferred medical services remains with the Public Assistance Committee, although in November 1931 the Council delegated to the Health Committee the powers contained in Part I of the Local Government Act, 1929, with respect to the provision of hospital accommodation.

INSTITUTIONAL ACCOMMODATION FOR THE SICK.

It was reported last year that discussion on certain financial and medical points was proceeding with Liverpool in connection with the reception of Bootle sick into the transferred hospitals. In February 1933 the heads of agreement were settled and provision was made for the agreement to have a tenure of twenty years from April 1930.

During the year the total admissions to the transferred hospitals numbered 3,482, of which figure, it may be noted, 1,436 were admissions on the orders of medical superintendents or masters, implying urgent conditions in which it was inadvisable to go through the ordinary routine of application to a Relieving Officer. In the form in which weekly returns are received it is not easy to ascertain with certainty the number of sick persons (hospital or infirmary patients) as contrasted with those not in need of medical service, but it appears that the weekly totals of persons chargeable to Bootle in transferred institutions (including able-bodied adults) varied from 416 in January to 299 in December.

The following table, prepared by the Medical Officer of Health of Liverpool at the request of the Ministry of Health, gives a classification of such sick on 31st December 1933 :—

CLASSIFICATION OF SICK IN INSTITUTIONS.

Classification of Wards.	Beds			Total
	Men	Women	Children under 16 years of age	
1. Medical	43	37	3	83
2. Surgical	23	19	1	43
3. Chronic Sick*	19	19	--	38
4. Children	—	—	53	53
5. Venereal	1	2	--	3
6. Tuberculosis	6	3	6	15
7. Isolation	—	—	4	4
8. Maternity	—	18	—	18
9. Mental—				
(a) Lunacy Act, 1890—				
(i) Short Stay ...	1	—	—	1
(ii) Long Stay ...	11	13	—	24
(b) Mental Treatment Act				
(i) Voluntary ...	—	—	—	—
(ii) Temporary ...	—	—	—	—
10. Mental defectives	1	1	2	4
11. Other	18	—	—	18
Totals ...	123	112	69	304

* Patients needing hospital treatment because they are suffering from some chronic disease; also aged infirm persons whose medical and nursing needs approximate to those of chronic patients.

DOMICILIARY MEDICAL ATTENDANCE.

The administration of medical out-relief included in the functions transferred to the Council on 1st April 1930 is controlled by the Public Assistance Committee acting through the Medical Officer of Health. For this purpose the Borough remained divided into two districts, under the charge of the District Medical Officers transferred from the late

West Derby Union, until it became clear towards the end of the year that the increasing demands on their services called for altered arrangements.

The average attendances weekly at the surgery at Cyprus Grove Relief Station had been 167, 221, and 239 in the fourth quarters of 1930-32 respectively, but the weekly average had risen in October 1933 to 334. An additional part-time District Medical Officer was accordingly appointed and took up duty on 12th February 1934, but in order not to prejudice any consideration which might later be given to alternative methods of providing domiciliary medical attendance the appointment was made on a temporary basis.

The rise in attendances naturally entailed more work for the Dispenser at Cyprus Grove and his services were accordingly extended in May 1933 to half time; with this addition the work remained manageable until December, but the number of items to be dispensed then became excessive having regard to the time available. Alternative methods of meeting the situation were considered by the Committee, and it was decided to institute a panel of chemists who would dispense drugs and medical requisites ordered by the District Medical Officer for the newly-created third District; satisfactory arrangements to effect this were made with local chemists and with the South-West Lancashire and Cheshire Joint (Prescriptions) Committee and came into force on 12th March 1934.

Examination of the returns of surgery consultations and home visits during the year showed the weekly average to have been 161 surgery consultations and 11 home visits in District No. 1, and 116 consultations and 11 visits in District No. 2.

VACCINATION.

According to information supplied by the Vaccination Officer, 1,195 successful primary vaccinations and one successful re-vaccination were performed during the year ended 30th September 1933, as compared with the previous year's figures of 1,220 and one respectively.

Appendix 16 presents the Annual Return of the Vaccination Officer respecting vaccination of children whose births were registered from 1st January to 31st December 1932, inclusive.

III. SANITARY CIRCUMSTANCES.

Drainage and Sewerage.—The Sewerage System is entirely by discharge into the River Mersey, with drainage areas and outfalls as described in the Report for 1930.

Closet Accommodation and Scavenging.—Every house, with the exception of three in the outlying parts of Orrell, is provided with one water closet or more, the conversion of middens having been completed in 1910. Similarly all houses are provided with ashbins, the conversion of ashpits having been completed in 1932.

SANITARY INSPECTION OF THE DISTRICT.

The staff for this work consists of the Chief Sanitary Inspector with four assistants, one of whom is engaged principally on special duties in connection with food inspection.

Nuisances.—On page 82 will be found a tabular statement showing the number of inspections made, and notices served by the Chief Sanitary Inspector. It will be noted that the number of nuisances for which notices were served on owners and occupiers was 5,700, as against 5,461 in 1932; the other work done under the Housing Acts is set out in the Housing Section of this report on pages 57 to 65.

Fertilizers and Feeding Stuffs Act, 1926.—No sample of fertilizers or feeding stuffs was obtained during the year.

Rag Flock Acts, 1911 *and* 1928.—There are no premises in the Borough where rag flock is manufactured, sold, or used.

Rats and Mice Destruction Act, 1919.—The occupiers of food shops, cafes, etc., have during the year been frequently advised as to the best means of ridding the premises of rats, and, in come cases, alterations of shops, and concreting of floors have been undertaken with excellent results. The official Rat Officer has been advised of all complaints received, to which he has given special attention. For National Rat Week in November advertisement of the fact of the responsibility of occupiers was inserted in the local Press, and requests were sent to horse keepers, millers, warehouse owners, etc., to make special efforts during the week, together with the circulation of a pamphlet giving suggestions as to suitable methods of ridding their premises of rats.

Common Lodging Houses.—There are four Common Lodging Houses in the Borough, an additional one having been registered during the year. They are all registered for the accommodation of men only, and between them have 168 beds. They were regularly inspected and a satisfactory standard of cleanliness was always maintained.

Canal Boats Acts, 1877 and 1884.—During the year 107 visits of inspection were made to Canal Boats on the Leeds and Liverpool Canal in the Borough. Written notices were served in respect of 7 boats for infringements of the Acts or Orders, and in 14 cases defects were remedied after verbal caution had been given.

IV. SANITARY CONTROL OF THE FOOD SUPPLY.

One of the Sanitary Inspectors holding the special Food Certificate of the Royal Sanitary Institute is engaged for the greater part of his time on work connected with the food supply, the sanitary supervision of which is undertaken in order to secure cleanliness in the preparation and distribution of foodstuffs, and to diminish the risk of possible infection thereof with disease-producing bacteria.

MILK SUPPLY.

Source of Milk Supply.—That portion of the milk supply of the Borough not brought by rail or road is derived from cows kept in shippons, of which there are now 18 in the town; the cows number approximately 285, a decrease from the pre-war figure of about 550. All the shippons received the careful attention of the Inspector, who paid 140 visits to them during the year. It is estimated that about one-quarter of the Bootle milk supply is derived from cows kept in these town shippons.

Dairies and Cowsheds.—Milk and Dairies Orders 1915 and 1926.—There are 67 premises registered as dairies or milkshops in the Borough; 18 premises are registered as cow-sheds, in which some 285 cows are kept, and a careful routine inspection is maintained by the Inspector working in collaboration with the Veterinary Officer. Four hundred and fifty-seven visits of inspection were made to cowsheds and dairies during the year, and in many cases as a result of suggestions made and advice given alterations were carried out with resulting improvement in condition; on the whole it may be said that these premises are maintained in a satisfactory state, although it was necessary to prosecute one dairyman for failure to maintain his dairy in a clean condition.

Bacteriological Examination of Milk.—It may be recalled that the Ministry of Health has recognised certain grades of milk, and has prescribed bacteriological standards, which have to be complied with. The recognised grades in order of safety as regards cleanliness and freedom from tuberculous infection are "Certified," "Grade A (tuberculin tested)," and "Grade A," and although there are in Bootle no dairymen holding licences to produce any of these designated milks, such are easily obtainable by purchasers willing to pay the higher price; for several years past a portion of the supply at the Isolation Hospital has been taken in the form of "Grade A (tuberculin tested)," and there is a small demand for the same clean and safe milk on the part of private customers.

With the object of promoting the cleanliness and safety of the local supply, bacteriological examination of samples has been continued, 47 milks having been examined, and the results obtained may be summarised thus. In 8 instances the standard of "Certified" milk and in 12 instances that of "Grade A" milk was reached, and of four pasteurised samples three conformed with the requirements of the Ministry of Health as to the bacteriological content of milk sold under that designation. Only in twelve instances was the milk considered to be really dirty, and the general results show a gratifying improvement since the beginning of systematic bacteriological examinations in 1924. The following table illustrates this progress; the "very satisfactory" correspond to "Certified" standard, the "satisfactory" to "Grade A" standard, whilst the "very dirty" represents milks in which the Bacillus Coli was present in 1/10,000 c.c. or in which the total bacterial count exceeded 2,000,000 per c.c.

Cleanliness of Milk.

Year	No. of Samples.	Percentage of Samples			
		Very satisfactory	Satisfactory	Dirty	Very dirty
1924	12	—	—	25	75
1925	28	4	7	43	46
1926	28	25	18	25	32
1927	30	23	13	28	36
1928	32	16	19	40	25
1929	32	28	28	31	13
1930	34	24	32	29	15
1931	44	34	27	28	11
1932	37	32	19	36	13
1933	47	17	26	32	25

Milk and Tuberculosis.—The results of the bacteriological examination of the 47 samples mentioned above showed that six samples were infected with tubercle bacilli. In one case the milk was produced in a Bootle shippon housing 4 cows, and the infected cow, having been identified by the Council's Veterinary Surgeon, was slaughtered under the Tuberculosis Order and was found on post-mortem examination to have generalised tuberculosis. In the other cases the milk was produced at farms in Lancashire and the West Riding of Yorkshire; the County Medical Officers were notified and later reported that in two instances the animals producing the infected milk had been discovered and had been slaughtered, but that examination both veterinary and bacteriological had failed to discover the sources of infection in the other cases.

Pasteurised Milk.—It has recently been stated that the evidence that raw cows' milk often causes human disease is now so strong that those who try to belittle it lay themselves open to charges of ineducability or bad faith. Hence many of the antagonists of pasteurisation have changed their ground and base their opposition on the harm it is alleged to do to the milk. But on this point animal experiments have on the whole failed to show any real inferiority of pasteurised milk to raw, and it may fairly be said that observations on infants and children have failed to demonstrate the superiority from a nutritive point of view of raw milk. For these reasons, and on account of the slow increase in the demand for the certified safe milks, one foresees a greater use of pasteurisation in the milk supply of towns, but the difficulty here, as well as in a number of other areas, is that milk producers or distributors apply some form of heat treatment to their milk in order to prolong its keeping qualities without submitting themselves to the official control which precedes and follows the possession of a licence to sell milk under the official designation of "pasteurised." So far in Bootle there is only one holder of such a licence, and during the year 7 samples of this producer's milk were taken for bacteriological examination: all except one conformed to the requirements of the Ministry of Health.

The scheme of milk supply to school children by the Education Committee requires the milk to have been pasteurised, and the examination of 17 samples of this school milk showed that the official requirements were being complied with in 14 cases.

Cleanliness and Safety of Milk—The two questions of cleanliness and safety of milk are distinct and separate, and it would be thought that at least there would be no differences of opinion as to their desirability. It has, however, been pointed out by one engaged in milk distribution on a large scale that although the production of clean milk calls for nothing which exceeds the resources and the understanding of the humblest producer, requiring, as it does, only such regard for elementary domestic decencies as would appear obvious to a scullerymaid—" the cow's udder must be clean, the milking should be conducted with clean dry hands, and, chiefest of all, every utensil must be honestly scrubbed and religiously scalded after use "—yet the official grading system sanctions over and above the price paid for milk a further sum for the cost of decency in production even though this does not extend beyond that which should be observed in all processes of food production or distribution.

The second question relating to the safety of the milk supply is assuming even greater importance with discussions on foot to discover methods whereby the " surplus milk " of the Milk Marketing Board can be made available as an organised supply to school children. Although milk is a medium which is capable of conveying a number of diseases practical consideration is limited to its capacity for harbouring tubercular infection and transmitting it to infants and children. Many years of experience have shown that the early detection of open cases of tuberculosis in cattle is by no means easy in practice, and that the existing methods of veterinary supervision of dairy herds are insufficient to guarantee the freedom of the milk supply from living tubercle bacilli. These facts being established and, further, it having been proved that efficient pasteurisation will kill tubercle bacilli in milk without appreciably impairing its food value it is suggested that any scheme propounded for official distribution of surplus milk by the local Education Authority must contain such safeguards to health as the above state of affairs clearly indicates to be necessary.

PREPARATION OF ICE CREAM.

Bootle Corporation Act, 1930, Section 21, requires the registration of persons and premises used for the manufacture, etc., of ice cream, and gives powers for revocation of the registration of such persons if the Corporation is satisfied that the public health is, or is likely to be, endangered by any act or default of such persons.

At the end of the year the registrations totalled:—

PREMISES—

For the manufacture for sale and sale of ice cream	64
For the sale only of ice cream	50

PERSONS—

For the manufacture for sale and sale of ice cream	64
For the sale only of ice cream	56

These special powers of supervision were obtained because of the necessity of ensuring the wholesomeness of milk products eaten largely by children, and during last season 142 visits of inspection were made to registered premises, and 22 samples were obtained and submitted for bacteriological examination as affording the most reliable index of the degree of cleanliness reached in the production of the ice cream.

The following table sets out the results of such examination, those samples which failed to reach the standard set for "Grade A" milk being entered as unsatisfactory. Suitable communications were addressed to the purveyors of the unsatisfactory samples, and advice was given as to the action required to bring about an improvement.

CLEANLINESS OF ICE CREAM.

No.	B. Coli present in:—	Bacteria per c.c.	Source of Supply.	Remarks.
1.	—	1,300	Large manufacturer.	Satisfactory
2.	—	9,000	Do.	Do.
3.	—	4,100	Dairy.	Do.
4.	—	108,000	Small general shop.	Do.
5.	—	180,000	Do.	Do.
6.	1/10 c.c.	37,000	Do.	Do.
7.	1/100 c.c.	81,000	Do.	Unsatisfactory
8.	1/100 c.c.	120,000	Do.	Do.
9.	1/100 c.c.	320,000	Do.	Do.
10.	1/100 c.c.	736,000	Do.	Do.
11.	1/1,000 c.c.	82,000	Large manufacturer.	Do.
12.	1/1,000 c.c.	120,000	Do.	Do.
13.	1/1,000 c.c.	120,000	Small general shop.	Do.
14.	1/1,000 c.c.	384,000	Do.	Do.
15.	1/1,000 c.c.	1,400,000	Do.	Do.
16.	1/1,000 c.c.	4,000,000	Dairy.	Do.
17.	1/1,000 c.c.	11,000,000	Dairy.	Do.
18.	1/10,000 c.c.	530,000	Dairy.	Do.
19.	1/10,000 c.c.	540,000	Large manufacturer.	Do.
20.	1/10,000 c.c.	1,880,000	Small general shop.	Do.
21.	1/100,000 c.c.	1,320,000	Do.	Do.
22.	1/100,000 c.c.	1,560,000	Dairy.	Do.

MEAT AND OTHER FOODS.

Butchers' Shops.—There is no slaughterhouse in the Borough, and the inspection of meat is confined to butcher's shops, food factories and cold stores. There are 91 butchers' shops, to which 841 visits of inspection were made during the year. On 19 occasions unsound and diseased meat was found in shops and food factories; the bulk of the diseased meat had been previously inspected outside the Borough, in which cases the authorities concerned were notified. Most of the unsound meat was decomposed and was found in pickling tubs, vats and refrigerators; frequent warnings were given regarding the objectionable practice of pickling partly decomposed meat. In general the standard of cleanliness of butchers' shops in the Borough is high.

Public Health (Meat) Regulations, 1924.—It was necessary on 17 occasions to warn tradesmen respecting contraventions of the Regulations, grocers being the chief offenders by exposing uncovered bacon on rails outside the shop to dry.

Sale of Food (Labelling) Order, 1921.—This Order provides for the marking of any imported meat as such, or else for an indication of the country of origin, e.g., New Zealand, and is a safeguard for the buying public inasmuch as home killed and imported frozen or chilled meats are appropriately marked. On 30 occasions warnings were issued respecting contraventions of this Order.

Merchandise Marks Act, 1926.—The Act provides for the marking of imported foodstuffs (fresh apples, butter, currants, raisins, sultanas, eggs, raw tomatoes and honey). Some 331 visits of inspection were made under this Act, and except in comparatively few instances the origin of the produce was indicated.

Fishmongers' Shops.—There are 40 shops in the Borough from which fresh fish is sold, and 159 visits of inspection were made during the year. These shops are maintained in satisfactory condition.

Fish Frying Shops.—The trade of fish frying is carried on at 62 shops, to which 99 visits of inspection were made during the year. Suggestions were made from time to time to occupiers regarding methods

of preparation, installation of ranges, etc., and considerable improvement resulted, and although there are no bye-laws in force in the Borough with respect to these premises, they are maintained in a satisfactory condition.

Disposal of Unsound Food.—The amount of unsound food detected is shown in the table below; all was voluntarily surrendered.

	Tons.	Cwts.	Qrs.	Lbs.
Meat	—	12	0	22
Meat, canned	1	4	3	13
Fruit and Vegetables	—	—	1	11
Fruit and Vegetables, canned ...	1	0	1	19
Condensed Milk	1	14	0	16
Jam	—	2	2	4
Treacle	—	—	2	22
Fish, canned	—	2	2	17
Fish, fresh	—	—	—	23
Coffee	—	—	—	3
Total ...	4	18	0	10

All fresh meat is burned at the Corporation Destructor, Pine Grove. Other food deemed safe to be used for pig feeding is collected by two pig feeders and utilised for pig food under the supervision of the Inspector, who checks each amount on arrival at the piggery and sees it placed in steam boilers for cooking.

Food Factories.—There are 13 food factories in the Borough and a systematic inspection is carried out, 156 visits of inspection having been made during the year. Although maintained in a very satisfactory condition, on occasion warnings were given respecting lack of cleanliness of the premises. 49 premises are now registered under the Bootle Corporation Act 1920 as used for the preparation of potted or preserved foods.

Bakehouses.—There are 19 bakehouses (6 being underground) and 21 confectionery bakehouses. 146 visits of inspection were made during the year. Improvement was effected in one or two cases as a result of observation and suggestions made during routine inspections. The general condition is good.

Cold Stores.—These premises are regularly inspected and are maintained in satisfactory condition. One of the stores is a Registered Egg Store, but no marking of shell eggs under the Ministry of Agriculture's Regulations was undertaken in the past year.

Food and Drugs (Adulteration) Act, 1928.—The Public Analyst is Mr. W. H. Roberts, M.Sc., F.I.C.

Table 9 on page 86 shows that 240 samples were taken, of which 11, or 4·6 per cent., were adulterated or not up to standard. One hundred and thirty-eight of these were taken informally, and in cases where adulteration was detected formal samples were subsequently obtained in order that the necessary legal action might be instituted. One hundred and twenty-six samples of milk were obtained, of which 54 were taken informally; in the other 72 cases, however, the procedure prescribed by the Act was adopted. Nine of the milk samples (6 formal and 3 informal) were found to be adulterated.

Seven of the nine milk samples not up to standard were of milk produced outside the district. The total number of samples obtained of milk produced outside the district and taken in course of delivery was 41.

As regards the six formal milk samples reported upon adversely, legal proceedings were instituted in one instance for selling milk with a deficiency in milk fat of 35 per cent., and the vendor was fined 20s. with £1 1s. costs; and in the remaining five the adulteration was only slight and the vendors were cautioned.

The Public Analyst has kindly supplied the results of the analyses of every sample of milk submitted to him from Bootle, and it is interesting to note that, including the samples returned "not genuine," the average amount of fat was 3·58 per cent., and of non-fatty solids 8·88 per cent., the minimum standard fixed by the Board of Agriculture in the Sale of Milk Regulations, 1901, being 3 per cent. fat and 8·5 per cent. non-fatty solids, below which figures milk is presumed to be not genuine.

Nine samples of condensed milk were submitted to the Analyst, who certified that they were all genuine and correctly labelled as provided by the Public Health (Condensed Milk) Regulations, 1923-1927.

Public Health (Preservatives, etc., in Food) Regulations, 1925-1927.—A reference to the table on page 87 shows that 190 samples were examined under these Regulations for the presence of preservatives, including 126 of milk and 6 of cream.

Two vendors were cautioned for not exhibiting statutory labels declaring the presence in sausages of a preservative which was found to be present.

V. PREVALENCE OF NOTIFIABLE DISEASES.

Zymotic Diseases.—During the year there were 83 deaths from the seven principal zymotic diseases, viz., small pox, measles, whooping cough, diphtheria, scarlet fever, diarrhoea, and fever (including typhoid, enteric, and typhus). This is a death rate of 1·07 per 1,000 of the population; it compares with a decennial rate for 1923-32 of 0·93.

The number of cases of infectious diseases notified during the year is briefly summarised below, and fuller detail is given in Table 2, page 68.

There was no notification of smallpox, cholera, plague, typhus fever, relapsing or continued fever, trench fever, or dysentery.

	Cases notified.	Cases admitted to hospital.	Deaths.
Typhoid Fever	8	6	—
Diphtheria	156	151	21
Scarlet Fever	625	432	2
Puerperal Fever	3	3	2
Puerperal Pyrexia	45	43	4
Ophthalmia Neonatorum	9	3	—
Erysipelas	66	35	6
Infantile Diarrhoea (under two years)—voluntarily notifiable .	71	4	33
Influenzal Pneumonia	14	4	—
Acute Primary Pneumonia ...	267	143	58
Cerebro-spinal Meningitis	10	9	2
Polio-myelitis	3	3	—
Malaria	1	—	—
Encephalitis Lethargica	1	1	—
Tuberculosis—			
(a) Pulmonary	186	103	104
(b) Non-Pulmonary	65	40	13

SCARLET FEVER.

Incidence.—Six hundred and twenty-five cases were notified, being a rate of 8·73 per 1,000 of the estimated population, compared with 2·93 in 1932 and 3·7 in 1931, and a rate of 3·21 per 1,000 for England and Wales. The total of notifications showed a large increase from the experience of 1932, with the highest incidence in the last quarter of the year; the epidemic, which was also experienced by neighbouring areas, constituted the largest outbreak since 1894. The type of disease was less severe, and there were only two deaths from scarlet fever during the year; this is equivalent to a mortality rate of 0·03 per 1,000 of the population, as compared with 0·02 per 1,000 for England and Wales. The Table below shows that Bootle, in common with other areas in South West Lancashire, has usually returned higher scarlet fever mortality-rates than the country as a whole, although it has experienced proportionately the same improvement during the last thirty years.

Period.	BOOTLE.		England & Wales.
	No. of Deaths.	Rate per 1,000.	Rate per 1,000.
1891 1900 ...	202	0·37	0·16
1901 1910 ..	160	0·25	0·11
1911-1920 ...	70	0·11	0·05
1921-1925 ..	36	0·09	0·03
1926-1930 .	22	0·05	0·01
1931 ...	1	0·01	0·01
1932 ..	5	0·06	0 01
1933 ...	2	0·03	0·02

In each of 61 houses two cases of scarlet fever occurred, in 18 houses there were three cases, and in 3 houses four cases.

Hospital Isolation in Scarlet Fever — Four hundred and thirty-two Bootle cases, or 69 per cent. of the cases notified, were admitted to Linacre Hospital, with two deaths. In the latter half of the year the demand for admission to hospital could not be fully satisfied from time to time, and in giving consideration to the question of increasing the available accommodation the whole matter of reconciling public sentiment with the broader principles

of public health was carefully examined. The attention of the Committee was drawn to the opinions expressed in a report issued by the Ministry of Health in 1927 on " Some Administrative Aspects of Scarlet Fever," where it was pointed out that at the present time a large percentage of scarlet fever cases are sent to hospital not primarily in the interests of public health nor in many cases particularly in the clinical interests of the patients, but largely on sociological and compassionate grounds; although, considering their needs as patients, the subjects of pneumonia, measles, influenza, and encephalitis have often superior claims upon hospital care and treatment to those of many scarlet fever patients, and the stress of nursing such cases at home is often not less but rather more than in scarlet fever. In truth, only a very small proportion of patients suffering from scarlet fever urgently require hospital treatment, and there are other more important diseases the hospital treatment of which would equally relieve domestic difficulties in the house which they invade.

It is the general opinion, the report continued, that patients who suffer from a severe form of the disease, who are not too ill to be removed, and who cannot be safely treated at home should be admitted to hospital as soon as possible. In the public interest, cases occurring in homes where other members of the family are engaged in milk-selling, clothes-making, etc., etc., should as a rule be isolated in hospital; the same course will be considered appropriate, as a rule, in houses where there are several susceptible school children. There remain in addition those circumstances common in the larger industrial areas, where home conditions are utterly unsuitable and where the retention of an infectious case at home may mean loss of work and wages for one or more of the family—here, too, it is difficult to dissent from the practice of those who remove patients to hospital.

Use of Scarlatinal (Anti-Streptococcal) Antitoxin. — Dr. Hannah reports that of 496 cases treated to a termination during the year, 140 received injections of scarlet fever anti-streptococcal serum. There were two deaths, neither of them in the anti-toxin series of cases.

The average stay in hospital of the recovered cases was, in those treated by anti-toxin 34 days, and in those not so treated, 33 days. When, however, from these figures is deducted the cases whose lengthened stay in hospital was due to conditions unconnected with the scarlatinal infection (*i.e.*, concurrent infections, cross infections, and

carriers of the diphtheria organism), there were left 131 cases treated by anti-toxin with an average stay of 31 days, and 323 not so treated whose average stay was 34 days. Complications attributable to scarlet fever occurred in 15 per cent. of the total cases treated by anti-toxin and in 13·7 per cent. of those not so treated. This year, however, there was a large proportion of mild cases in which the use of anti-toxin was not necessary.

DIPHTHERIA.

The increase in the number of notified cases of diphtheria first noted during 1927 was sustained during the year under review, during which 156 cases were notified, as against the average of 112 recorded for the ten years ended 1926. The incidence was 2·02 per 1,000 of the estimated population, and the case fatality was 13·5 per cent. One hundred and fifty-one cases, or 97 per cent. of those notified, were removed to hospital. Tracheotomy was performed in one instance during the year for laryngismus stridulus; this case however died early in 1934.

The occurrence of a secondary case of diphtheria in an infected household was recorded on eleven occasions, and the occurrence of a third case of two occasions.

The table which follows demonstrates an appreciable reduction in diphtheria mortality locally as well as nationally during the last forty years, although the local experience has been unsatisfactory during the last four years:—

Period.	BOOTLE.		England & Wales.
	No. of Deaths.	Rate per 1,000.	Rate per 1,000.
1891-1900 ...	136	0·24	0·32
1901-1910 .	120	0·18	0·19
1911-1920 .	132	0·18	0·14
1921-1925 . .	32	0·08	0·09
1926-1930 ..	39	0·09	0·08
1931 ..	14	0·18	0·07
1932 ...	13	0·17	0·06
1933 ...	21	0·27	0·06

Prevention of Diphtheria.—During 1932 a scheme was inaugurated whereby an offer of immunisation against diphtheria was made to the parents of infants and young children in the Borough. Such protection can be conferred without risk to the child and without any disturbance of health by the administration of three injections at, say, fortnightly intervals of a toxoid-antitoxin mixture which stimulates the body to produce immunity against subsequent exposures to infection; the immunity is not produced instantaneously, but increases steadily through a period of several weeks or months.

The machinery adopted with the co-operation of the Education Committee was to send explanatory letters, with returnable forms of request for immunisation, to parents of children attending the Infants' Department.

During 1933 the first round of visits to the schools was completed, and the scheme is now being continued by extending the offer to parents of all new entrants. A second method of approach is afforded by making a similar offer of immunisation against diphtheria to parents of each child patient at Linacre Hospital with scarlet fever, and a third is obtained by the Health Visitors advocating it for children under school age in attendance at the Infant Clinics. In addition, there is growing a spontaneous demand on the part of individual parents for the protective inoculation of all their children.

The following tabular statement classifies the children who completed the series of inoculations during 1933, making, with those inoculated during 1932, a total of 1,582.

Place of Treatment.	Total.
Elementary Schools	773
Infant Clinics	108
Linacre Hospital	68
Total ...	949

Hitherto, there have been four notifications of diphtheria in inoculated children, and particulars of these cases are given below:—

Age.	Date of Notification.	Date of Third Inoculation.	Remarks.
7 years	22nd Jan., 1933	14th Oct., 1932	Bacteriological case only, no clinical symptoms.
4 years	7th Feb., 1933	14th Oct., 1932	Bacteriological case only; with broncho-pneumonia.
5 years	22nd Feb., 1933	13th Feb., 1933	Moderate severity.
6 years	7th Sept., 1933	7th Nov., 1932	Mild case.

OTHER ZYMOTIC DISEASES.

Enteric Fever.—Eight patients were notified during the year as suffering from fevers of the enteric group. In no instance was it possible to discover the source of infection.

Influenza.—Fourteen notifications of influenzal pneumonia were received, and 19 deaths from influenza were recorded. These figures are indicative of the freedom of the town from influenza in an epidemic form, except during the first weeks of the year.

Measles.—During 1933 measles caused 11 deaths, compared with 40 in 1932, and an average of 20·8 during the ten years ended 1932. The Bootle death-rate from this cause was 0·14 per 1,000, compared with 0·05 throughout England and Wales.

Complete information as to the incidence of measles is not now available, but during the year 72 cases occurring in school children were reported under the Bootle Corporation Act, 1920.

The sanitary measures for the control of measles on the accepted lines of notification, isolation, disinfection and quarantining of contacts, are disappointing inasmuch as cases are infectious in their early catarrhal stage before the disease is recognised as measles, and Public Health activity is accordingly limited to such steps as will postpone

the age of attack (and hence diminish the case fatality rate), and to the provision of nursing assistance in cases where serious lung complications supervene; the contemplated extension of Linacre Hospital will be of service in this connection, inasmuch as it will then be possible to admit some, at least, of the cases of measles in children under the age of three years, after which age the fatality rate shows an appreciable fall.

The table which follows sets out the reduction in the mortality from measles which has occurred throughout England and Wales since 1890; it also shows that although some degree of reduction has been obtained locally the measles death rate for Bootle is still high, and comparison with the corresponding tables for scarlet fever and diphtheria demonstrates the greater importance of measles as a killing disease.

Period.	BOOTLE.		England & Wales.
	No. of Deaths.	Rate per 1,000.	Rate per 1,000.
1891-1900 ...	165	0·30	0·41
1901-1910 ...	294	0·45	0·31
1911-1920 ...	266	0·37	0·28
1921-1925 ...	112	0·27	0·12
1926-1930 ...	85	0·20	0·10
1931 ...	13	0·17	0·08
1932 ...	40	0·52	0·08
1933 ...	11	0·14	0·05

Whooping Cough.—Whooping Cough caused 13 deaths during 1933 compared with 16 in 1932 and 20 in 1931. The death-rate was 0·16 per 1,000 of the population, compared with 0·05 throughout England and Wales. There is still much to be done in educating the public up to the knowledge of the fact that measles and whooping cough (so-called minor infectious diseases) are responsible year by year for many preventable deaths.

Diarrhoea.—Deaths from this disease numbered 36, or a rate of 0·46 per 1,000 of the population as compared with 0·34 last year.

Thirty-three of the deaths occurred in children under the age of two years, giving a rate per 1,000 births of 20·0 in Bootle, as compared with 7·1 throughout England and Wales.

The arrangements instituted in previous years by which this disease is notifiable during the third quarter of the year were continued, and 71 notifications were received, as compared with 43 in 1932 and 28 in 1931. The receipt of these notifications enabled instruction on the necessary sanitary precautions against the spread of infection to be given by the Infant Welfare Visitors, as well as nursing attention to be given by the Bootle District Nurses' Association.

LINACRE ISOLATION HOSPITAL.

Linacre Isolation Hospital, by arrangement with the respective Authorities, receives cases of infectious diseases from the urban districts of Litherland and Formby, as well as from the borough.

The year 1933 showed a large increase in cases admitted, the total being 745 as against 535 in 1932. The following table gives particulars of the cases admitted to the infectious disease wards, while particulars of cases in which the diagnosis was revised are given in Appendix 17, page 94.

An additional 12-bed cubicle pavilion, the erection of which was proceeding at the time of the issue of the last Annual Report, was opened for use in June, 1933. That extension, however, represented a curtailment, at the request of the Ministry of Health, of the scheme originally submitted in 1931 for the provision of 45 additional beds, and it was realised that alone it would not suffice to receive even cases of scarlet fever and diphtheria which may occur in epidemic times, nor would it accommodate cases of non-notifiable infectious disease—such as measles and whooping cough—save in exceptional circumstances.

Accordingly plans are under consideration for the further extension of the Hospital by the erection of a 28-bed pavilion, together with accommodation for the necessary additional nursing and domestic staff.

CASES TREATED IN THE INFECTIOUS DISEASE WARDS, LINACRE HOSPITAL.

DISEASE.	No. in hospital on 1st. January 1933.				No. admitted during the year.				No. discharged during the year				No. died during the year.				No. remaining in hospital 31st. December 1933.			
	Bootle	Litherland	Formby	Total	Bootle	Litherland	Formby	Total	Bootle	Litherland	Formby	Total	Bootle	Litherland	Formby	Total	Bootle	Litherland	Formby	Total
Scarlet Fever.	15	5	—	20	404	115	3	522	374	107	2	483	2	—	1	3	43	13	—	56
Scarlet Fever complicated by other disease.	2	—	—	2	5	4	—	9	7	3	—	10	—	—	—	—	—	1	—	1
Admitted as Scarlet Fever but diagnosis revised.	—	—	—	—	23	2	1	26	22	2	1	25	—	—	—	—	1	—	—	1
Diphtheria.	26	8	1	35	96	9	1	106	88	14	2	104	18	2	—	20	16	1	—	17
Diphtheria complicated by other disease.	—	—	—	—	2	—	—	2	1	—	—	1	—	—	—	—	1	—	—	1
Admitted as Diphtheria but diagnosis revised.	1	—	1	2	*59	12	1	72	57	11	2	70	2	—	—	2	*1	1	—	2
Other diseases	—	—	—	—	8	—	—	8	7	—	—	7	1	—	—	1	—	—	—	—
TOTALS	44	13	2	59	597	142	6	745	556	137	7	700	23	2	1	26	62	16	—	78

*Includes one Liverpool case.

Return Cases.—During 1933 there were 17 instances in which the discharge of scarlet fever cases from the hospital was followed by the recurrence of a new case or cases in the home. The return case rate was equivalent to 3·3 per cent. of those discharged as compared with 6·1 per cent. in 1932. The isolation periods of the patients giving rise to return cases varied from 24 to 79 days, with an average of 32; and intervals between discharge and the onset of the second case were 2 to 24 days, with an average of 7. There were, in addition, two instances of a return case following the release from isolation of cases of scarlet fever nursed at home.

Cross Infection.—The following cases of cross infection arose during the year. Two cases of scarlet fever developed measles; one case developed whooping cough; one case developed diphtheria; and one case admitted as scarlet fever, but not suffering from it, developed scarlet fever in the wards. Three cases of diphtheria developed scarlet fever; and one case of diphtheria developed measles.

Health of Staff.—Staff sickness was as follows during the year. Five nurses, suffering from mumps, scarlet fever, mastoid disease, rheumatism, and oedema of the legs, were warded for 21, 37, 19, 8, and 5 days respectively, and one wardmaid with tonsillitis for 26 days.

During the year nine nurses were Schick-tested and Dick-tested to determine their susceptibility to diphtheria and scarlet fever. Of these, one re-acted positively to the Schick-test, two re-acted positively to the Dick-test, and two to both Schick and Dick tests; all were immunised. One nurse contracted scarlet fever two months later.

Bacteriological Laboratory Work—

Examinations required.	Positive result.	Negative. result.	No. of Specimens examined.
Swabs for Diphtheria ...	381	5085	5466
Sputa for Tubercle Bacilli	256	795	1051
	637	5880	6517

In addition, 81 samples of milk, 561 specimens for venereal disease, and 61 miscellaneous specimens (including 22 of ice cream) were examined by Professor Beattie in the Pathological Department of the Liverpool University.

VI. TUBERCULOSIS.

Notification Register.—The Tuberculosis Notification Register contains the names of all persons notified as suffering from tuberculosis since the first operation of the Public Health (Tuberculosis) Regulations, 1911, after making corrections by the removal of names of those who have died, left the district, have been cured, or have been pronounced not to be suffering from tuberculosis. The register on 31st December included 326 males and 262 females suffering from pulmonary tuberculosis, and 139 males and 146 females suffering from non-pulmonary tuberculosis, making a total of 873 cases.

New Cases.—The total number of new cases coming to the knowledge of the Medical Officer of Health during 1933 was 251, as compared with the figures of 259, 246, 242, and 212 in the years from 1929 onwards.

Deaths.—The number of deaths caused by tuberculosis during 1932 was 116, or one death in every nine, giving a death-rate from this cause of 1·50 per 1,000 of the population, as compared with 1·32 in 1932 and 1·59 in 1931; it was 1·54 for the ten years ended 1932.

This represents a check to the decline in the tuberculosis mortality-rate recently recorded in Bootle, and set out in the following table:—

Period.	BOOTLE.		England & Wales.
	No. of Deaths.	Rate per 1,000.	Rate per 1,000.
1891-1900 ...	1106	2·17	2·01
1901-1910 ...	1127	1·76	1·65
1911-1920 ...	1370	1·82	1·42
1921-1925 ...	652	1·70	1·08
1926-1930 ...	572	1·49	0·94
1931 ...	123	1·59	0·89
1932 ...	102	1·32	0·84
1933 . .	116	1·50	

Dispensary Register.—A register is maintained of all cases of tuberculosis receiving public medical treatment. This Dispensary Register contains the names of all persons attending at, or seen in connection with, the Dispensary for diagnosis or for treatment of tuberculosis, including patients under general supervision (whether or not accompanied by domiciliary treatment), and patients or observation cases in residential institutions, and contacts. On December 31st 1933 the number of persons so classified and on the register was 673, as against 642 on January 1st 1933.

PULMONARY TUBERCULOSIS.

Incidence.—One hundred and eighty-six new cases suffering from pulmonary tuberculosis came to the knowledge of the Medical Officer of Health during 1933. The age and sex distribution of the patients will be found in the return on pages 80 and 81. The number includes 13 cases not formally notified. The numbers notified in the four preceding years were 180, 189, 184 and 154 respectively. In the case of five the first intimation was obtained from the death returns, while in 27 other cases notification was made at intervals of less than three months before death. The non-notified deaths, therefore, numbered 4·8 per cent. of the total of 103 deaths from pulmonary tuberculosis. Enquiry into these non-notified cases showed the omission to be on the part of institution medical officers in four instances, and private practitioners in the remaining case.

Deaths.—During the year 103 deaths were certified to be due to pulmonary tuberculosis, representing a rate of 1·33 per 1,000 of the population, as compared with 1·12 in 1932 and 1·49 in 1931.

Tuberculosis Visitors: Home Visitation—Four tuberculosis visitors, one of whom assists in the medical work of the Dispensary, and three of whom are engaged also on work in connection with Maternity and Child Welfare, are responsible for the sanitary supervision of the homes of notified and suspected cases. Every effort is made by the Visitors to make their calls helpful to the comfort of the patient and a

stimulus to the care exercised in preventing infection of others in the household. The visits totalled 2,427 (1,756 of which were for dispensary purposes) in the year under review.

Tuberculosis Dispensary.—The Dispensary is the central element of the tuberculosis scheme, and serves as a clearing house from which some cases are transferred to sanatorium, others to hospital, and others to their own medical attendant for domiciliary treatment, while a certain proportion remain in attendance at the Clinics held five times weekly and receive necessary treatment therefrom. As far as possible, however, this last aspect of the functions of the Dispensary is limited to the provision of specialist treatment not at the disposal of the general practitioner.

During the year 253 new cases, of whom 120 were sent by private practitioners and 24 by the School Medical Officer for opinion preliminary to notification, were examined at the Dispensary. Inasmuch as it is essential to regard the family rather than the individual as the unit for investigation, treatment and care, attention continued to be paid to securing the attendance for examination of contacts of notified cases, and during the year 127 were so examined.

The total attendances at the Dispensary during the year numbered 6,438, as compared with 6,084 in 1932; 654 specimens of sputum were examined, giving a positive result in 69 cases.

During the year 34 insured patients were referred to their panel doctor for treatment, and touch was kept with them by means of the insurance practitioners' quarterly reports and through the medium of the Tuberculosis Visitors; 307 report forms (G.P. 36) were sent out, and 191 were returned completed.

Radiographic Examinations.—The increase in the number of radiographic examinations recorded below is indicative of the steady extension of radiology at every stage of diagnosis and treatment, although it should be clearly understood that the X-ray photograph can tell of

structural changes in the chest contents without in many cases telling much about the underlying causes of the changes or whether the lesions are active and in need of treatment.

Experienced workers have pointed out that the film may reveal undoubted tubercular changes in the apex of the lung, but whether the patient is in need of costly and prolonged treatment must be decided by other clinical data which are afforded by the history, the symptoms, the physical signs, and the bacteriological findings.

The number of radiographic examinations was 171 during 1931, equivalent to 45 examinations per 100 notified cases and contacts, as compared with 2 per 100 in 1926. These cases were sent by arrangement to the Lancashire County Council's Tuberculosis Dispensary at Seaforth, and the Bootle General Hospital, but at the end of the year the Council decided to instal its own radiographic apparatus at the Health Centre, and it is expected that this will be available for use in May.

Maghull Sanatorium.—During the year 51 patients were admitted to the Institution with an average length of stay of 159 days for the 51 cases discharged during the year. Information is given in Section (G) on Form T.145 of the Ministry of Health on pages 71 to 75 of the results of treatment in Maghull Sanatorium and Linacre Hospital during the year.

Linacre Hospital Tuberculosis Pavilion.—During 1933, 59 Bootle cases were admitted to the Pavilion, the average length of stay of the 56 cases discharged (including 16 deaths) during the year being 111 days.

Artificial Pneumo-Thorax Treatment.—Treatment by induction of artificial pneumo-thorax, in order to secure collapse of the affected lung, was adopted at Linacre Hospital first in 1924, and since that date 14 cases have been considered suitable for this treatment. A tabulated statement gives the results so obtained.

RESULTS OF ARTIFICIAL PNEUMOTHORAX TREATMENT.

Beginning of treatment	Cessation of treatment	Length of treatment	Other treatment given	Condition to date	Time since treatment ceased
2/5/24	5/12/24	7 months	Hospital.	Not examined recently; known to be working	9 years
18/7/25	25/4/27	21 months	Hospital	Not examined recently; known to be working	6½ years
23/7/26	28/2/27	7 months	Hospital	Artificial pneumothorax not satisfactory; dead	—
11/12/26	—	6 years	Sanatorium	Still under treatment in Sanatorium	—
19/12/28	28/11/31	3 years	Sanatorium and Hospital	Disease developed in contra-lateral lung, double pneumothorax tried for a short period, but given up owing to signs of cardiac embarrassment; patient now in hospital.	2 years
18/10/29	9/1/32	27 months	Hospital	Condition quiescent	2 years
23/10/29	25/9/30	11 months	Hospital	Developed general tuberculosis; dead	—
17/9/30	9/1/32	16 months	Hospital	Condition quiescent when examined in November, 1933; has since left district	2 years
22/10/32	26/6/33	8 months	Hospital	Dead	—
11/11/32	—	—	Hospital	Treatment being continued; is working	—
11/11/32	14/12/33	13 months	Hospital	Dead	—
14/12/32	24/2/33	2 months	Hospital	Artificial pneumo-thorax not satisfactory; dead.	—
2/5/33	—	—	Hospital	Previously treated at Southampton from 30th Dec., 1932; treatment being continued	—
27/7/33	—	—	Hospital	Came under treatment with pleural effusion; fluid withdrawn and replaced by air, treatment being continued	—

NON-PULMONARY TUBERCULOSIS.

During the year 65 new cases of non-pulmonary tuberculosis were notified, as compared with 58 in 1932, namely:—30 glands, 19 bones and joints, 5 meningitis, 6 abdominal, 1 abscess, 3 kidney, and 1 mastoid; and there were 13 deaths registered. The agreement with the Leasowe Hospital for Children for the maintenance of beds for children suffering from non-pulmonary tuberculosis remained in force, and twelve cases were admitted during the year, and nine cases were discharged, one died, and nine cases were still in the Hospital at the end of the year.

The scheme for admission to general or special hospitals of cases of non-pulmonary tuberculosis, and for payment by the Council of the charges for maintenance and treatment in cases recommended or approved by the Tuberculosis Officer, was continued; during the year twenty-two such patients were admitted.

Dental Treatment.—During the year ten cases received dental treatment.

Public Health (Prevention of Tuberculosis) Regulations, 1925.—No action was taken under the above Regulations relating to tuberculous employees in the milk trade.

Public Health Act, 1925: *Section* 62.—No action was taken under this Section dealing with the compulsory removal of cases of tuberculosis to hospital.

ARTIFICIAL LIGHT TREATMENT.

The scheme of artificial light treatment by exposure of patients to general irradiation from carbon arc lamps, which was commenced in October 1925, was continued during the year. The staff, plant and working method were as described in previous reports. In addition, a mercury-vapour lamp was employed from July 1933.

The operation time was approximately 350 hours. The attendances made by patients totalled 2,618, of which 680 were made by patients referred under the Tuberculosis Scheme and 1,938 by patients referred under the Maternity and Child Welfare Scheme.

The attached tabular statement classifies conditions for which treatment was administered and the results obtained in the period under review.

Results of Artificial Light Treatment.

(a) Tuberculosis.

	Under Treatment 1st Jan., 1933	New Cases	Discharged			Ceased to attend	Under treatment, 31st Dec. 1933
			Much Improved	Improved	Stationary		
Tubercular Cervical Glands...	3	10	2	1	1	2	7
Tuberculosis of Bones	1	3	1	1	1	—	1
Lupus	—	4	1	—	—	—	3

(b) Maternity and Child Welfare.

	Under Treatment 1st Jan. 1933	New Cases	Discharged			Ceased to attend	Under treatment 31st Dec. 1933
			Much Improved	Improved	Stationary		
Rickets	31	54	5	34	4	28	14
Marasmus	—	1	1	—	—	—	—
Debility	6	6	—	5	1	4	2
Malnutrition	7	12	1	9	2	5	2
Totals ...	48	90	11	50	9	39	29

VII. VENEREAL DISEASES.

The Council's scheme for the treatment and control of venereal diseases provides for the maintenance of a treatment centre at the Bootle General Hospital and for the conduct of pathological examinations at the University of Liverpool. In addition payment is made for services rendered to Bootle residents attending the venereal diseases treatment centres of the Liverpool City Council. At the Council's Bootle Hospital treatment centre four clinics for men and two clinics for women and children are held weekly.

The Annual Statistical Report of the Medical Officer of the Treatment Centre will be found on pages 88 to 90. It shows 380 persons under treatment on 31st December 1933, as against 440 on 1st January 1933, and a decrease in new cases, the figures being 325 as contrasted with 344 in 1932.

The total attendances for treatment made at the centre during the year show a decrease from 25,605 to 15,769; the figure includes 3,513 attendances made between clinic days for the treatment of gonorrhoea at the irrigation centre. The average attendance at the male clinics was 71·6, and at the female clinics was 12·4. In-patient days totalled 569 as against 1,154 during the previous year. During 1933 107 cases were discharged on completion of treatment and observation, as contrasted with 116 during 1932, and 114 during 1931.

The Table below is a statement of the number of cases presenting themselves for treatment during the last five years:—

Bootle Venereal Diseases Clinic.

	1929	1930	1931	1932	1933
New Cases (total)	386	372	332	344	325
New Cases (syphilis)	70	65	64	76	58
Total attendances (excluding Irrigation Department)	14045	14193	15502	16876	12256
Irrigation Department attendances	10455	11895	15744	8729	3513
In-patient Days	656	749	585	1154	569
No. discharged after completion of observation and treatment	43	77	114	116	107
No. who ceased to attend after completion of treatment, but before final tests as to cure	65	18	121	170	105

Bootle residents accounted for 46 per cent. of the cases under treatment at the Bootle Hospital Centre, the Authorities contributing the next largest number of cases being the Lancashire County Council with 22 per cent., and Liverpool with 12 per cent.

Against this attendance of outsiders at the Bootle Centre there may be set off the user of Liverpool centres by Bootle residents, and the following table summarises the available information as to the total number of cases among Bootle residents dealt with at the various local centres for the first time during 1933.

	New Cases—Bootle Residents.					
	Syphilis	Soft Chancre	Gonorrhœa	Other Conditions	Total	Total Attendances
Stanley Hospital ...	14	—	17	7	38	1684
Seamen's Dispensary ...	9	4	48	16	77	2736
Royal Infirmary ...	6	—	6	2	14	851
Royal Southern Hospital	1	—	—	—	1	129
David Lewis N. Hospital	1	—	—	—	1	17
Bootle General Hospital	27	2	92	29	150	8664
Total ...	58	6	163	54	281	14081

The following table sets out the change in incidence of the venereal diseases locally, in so far as it can be measured by records of new cases presenting themselves for treatment at the Bootle Centre:—

	New Cases.					
	Syphilis.			Gonorrhoea.		
	Males.	Females.	Total.	Males.	Females.	Total.
1920	177	48	225	211	5	216
1921	156	44	200	176	2	178
1922	126	57	183	154	5	159
1923	134	52	186	147	9	156
1924	123	37	160	199	10	209
1925	76	16	92	153	4	157
1926	81	21	102	137	4	141
1927	47	20	67	151	5	156
1928	79	28	107	216	23	239
1929	59	11	70	186	35	221
1930	51	14	65	190	34	224
1931	48	16	64	160	20	180
1932	53	23	76	185	25	210
1933	43	15	58	145	26	171

When the Table is examined it will be noted that there has been a large decrease in the number of new cases of syphilis since 1920, but only a slight decrease in the number of cases of gonorrhoea which presented themselves for treatment; it is probable that the figures represent a real fall in the incidence of syphilis.

VIII. MATERNITY AND CHILD WELFARE.

No extension of the Council's Maternity and Child Welfare Scheme was made during the year, but the first full year's experience of the working of the Health Centre demonstrated the advantages of that provision.

ANTE-NATAL WELFARE.

Home Visiting of Expectant Mothers.—A great deal can be done to promote normal child-birth by careful instruction as to general and personal hygiene, and as to the need for suitable food, open-air exercise and rest, adequate sleep, and properly devised clothing. The usual efforts to improve the general management of pregnancy by such instruction have been continued, and the Health Visitors paid 1,170 home visits to expectant mothers for this purpose during the year.

Ante-Natal Clinics.—The ready use of the facilities provided at the Ante-Natal Clinics in Bootle for medical supervision during pregnancy is well known to the Council, and this position was again improved upon during 1933. It may be recalled that the first Ante-Natal Clinic was established in Bootle in 1920, in which year expectant mothers equivalent to 8 per cent. of the total number of births came under public medical supervision. During 1933 four Ante-Natal Consultations were held each week, and in all 855 new cases attended, corresponding to 51·8 per cent. of the total registered births; in addition, 197 cases carried over from the preceding year continued under supervision, and a total of 4,424 attendances was made, with an average of 22 persons per consultation.

Dental Treatment of Expectant and Nursing Mothers.—One afternoon weekly is devoted to the dental treatment of expectant and nursing mothers, and the treatment given has been in the nature of extractions, fillings and the supply of artificial dentures. The dental officer points out that, owing to the unfortunate prevalence of oral sepsis and of inflammatory conditions of the gums, radical measures of treatment rather than conservative methods have to be adopted with the result that the greater part of the time is taken up in construction of dentures for the patients. This important mechanical issue is supervised by the dentist, who also sees that his patients are advised on matters of diet and oral hygiene.

The number of patients treated during the year rose from 97 in 1932 to 171, and the estimated cost of the dentures supplied was £75 10s. 0d., of which the patients' contributions were assessed at £35 12s. 6d. 39 cases were carried forward to 1934.

MATERNAL WELFARE.

Nursing Homes Registration Act, 1927.—There is one Nursing Home proper within the Borough, as well as seven Maternity Homes, on the register. Bye-laws governing the conduct of these Nursing Homes were made by the Council in November 1931.

The Practice of Midwives.—The number of midwives resident in Bootle on the local roll is 26, as against 27 in the preceding year; ten others, resident outside the district, have also given notice of their intention to practise in the Borough; all are trained. The above figures do not include midwives practising in local Municipal Maternity Homes.

Regulations of the Central Midwives' Board require medical help to be sought by the midwife in all cases of illness of the patient, or the child, or of any abnormality occurring during pregnancy, labour, or lying-in, and 323 records of sending for medical help were received. Thirty-eight of the calls were on account of abnormalities during pregnancy, 217 during labour, 27 during the puerperal period, and 41 for conditions affecting the child.

As from 1st April 1922, the Council accepted responsibility for the payment of midwives' fees in approved necessitous cases. Applications in respect of this service are considered with full information as to the family income and outgoings, and are granted only on satisfactory evidence that the applicant is not entitled to maternity benefit under the National Insurance Acts. During the year 63 applications were granted, as compared with 19 during 1932.

Under the 1918 Act the Local Supervising Authority is responsible for the payment of fees to doctors called in by midwives, and last year the number of such accounts received, in respect of cases where the doctor himself was unable to recover the fee, showed a decrease; 243 accounts, totalling £335 0s. 6d., were sent in, as compared with 275 accounts, totalling £402 13s. 6d., in 1932. In respect of this sum, the contributions to be recovered from the patients were assessed at £62 15s. 0d.

Milk Assistance Scheme.—The Council's Milk Assistance Scheme, under which dried milk is granted on the Clinic Medical Officer's recommendation, to infants, and to expectant and nursing mothers, in necessitous cases falling within a certain income scale, continued in force. In all, milk to the value of £632 2s. 5d., and cod liver oil emulsion to the value of £12 6s. 2d., making a total of £644 8s. 7d., was granted by the Council to infants and to nursing and expectant mothers, on the advice of the Medical Officer, as compared with £549 3s. 7d. in 1932.

Institutional Provision for Maternity Cases.—As is the case elsewhere, an increasing number of mothers choose to go into public institutions for confinement, and last year 297 patients were delivered in Walton Hospital at the cost of the Public Assistance Committee, and 167 patients were delivered in the Municipal Maternity Home; in addition 40 patients were delivered in voluntary hospitals. The total of 504 represents 30·5 per cent. of the births registered during the year.

Maternity Home.—During the year 1933, 173 patients were admitted to the Maternity Home, the average duration of stay being 13·6 days; admissions in 1932 numbered 169. Six cases were treated for ante-natal supervision, 135 cases were delivered by the nursing staff, and 32 cases were delivered by doctors. Medical assistance was called in by the Matron on 8 occasions during labour, 26 times for rupture of perineum, and 5 times on account of the condition of the infant. Three cases were notified as puerperal pyrexia. There were no cases of ophthalmia neonatorum or of pemphigus. All the cases but three left the institution with their babies being breast fed.

Cases delivered by forceps numbered 7, or 4·2 per cent., as compared with 29·5 per cent. in a recently prepared examination of 14,614 cases delivered in private medical practice.

There were 7 foetal deaths (still-born or dying within 10 days of birth) in 5 of which the child was still-born.

Ninety-nine of the patients were admitted in respect of their first confinement, and there were 31 cases of readmission to the home of former patients, of whom 14 were admitted for the third time.

Post-Natal Supervision of the Mother.—The medical examination of mothers a few weeks after delivery, locally first instituted in 1929, has been continued and 115 patients attended for such post-natal super-

vision as compared with 77 in 1932. These cases included 7 patients who came for advice after abortion and 10 cases not recently pregnant who sought advice with regard to conception control.

The following list of abnormalities found on general examination must not, as has previously been pointed out, be taken as presenting a true picture of the conditions of the average woman after confinement, although it certainly furnishes evidence of the advantage to be gained by systematic overhaul:—

Anaemia	34
Constipation	24
For dental treatment	9
Haemorrhoids	7
Mastitis	5
Cardiac disease	4
Catarrhal complaints	4
Tuberculosis—for observation	3
Syphilis	1
Gonorrhoea	1
Other conditions	7

The disposal of cases needing treatment was as follows:—8 cases were referred to Hospital, 2 cases to Convalescent Homes, 5 cases to their own doctor, 19 cases to the Mothers' Welfare Clinic, and 9 cases to the Dental Clinic.

Puerperal Infection.—Forty-five cases of puerperal pyrexia and three cases of puerperal fever were notified during the year. Two deaths were registered from puerperal fever, and four from other diseases and accidents of pregnancy and parturition.

During the year four cases of maternal death during pregnancy and parturition occurred, the causes of death being registered respectively as (1) general peritonitis, pelvic cellulitis, (2) peritonitis following delivery, operation for peritonitis, (3) general septicaemia following abortion, and (4) post-partum haemorrhage, confinement. The circumstances of the confinements were investigated by the Medical Officer of Health, who received the full co-operation of the medical attendants concerned and confidential reports, not identifying the patients, were sent to the Departmental Committee on Maternal Mortality set up by the Ministry of Health.

The six deaths thus classified to pregnancy and childbirth give a maternal mortality rate of 3·63 per 1,000 (live) births, and the following table shows that although there have been wide fluctuations in this rate, the local experience has been somewhat more favourable than that of the country as a whole.

MATERNAL MORTALITY.
(Classification as in use since 1911).

Period.	BOOTLE.		ENGLAND & WALES.
	No. of Deaths.	Rate per 1,000 Births.	Rate per 1,000 Births.
1911-1920	66	3·13	4·07
1921-1925	31	3·10	3·90
1926	2	1·08	4·12
1927	10	5·50	4·11
1928	3	1·72	4·43
1929	5	3·01	4·33
1930	6	3·35	4·40
1931	7	4·20	4·11
1932	6	3·39	4·24
1933	6	3·63	4.42

INFANT WELFARE.

Notification of Births Acts.—The number of live births notified under these Acts was 1,523, or 99·4 per cent. of the total number of births (namely, 1,532) actually registered within the Borough; of the 1,523 notifications 249 were births to parents who normally resided outside the Borough. 1,497 notifications were received from midwives and 26 from doctors and parents. In addition there were 63 still-births notified (including 10 to non-Bootle residents).

The babies were visited shortly after birth by the Infant Welfare Visitors, unless it was considered that suitable advice could be obtained from other sources. A summary of the work of the Infant Welfare Visitors is given on page 91.

Births Registered.—The number of live births registered in the district was 1,532, from which 259 are to be deducted as born in Bootle to residents of other districts, and to which are to be added 379 births to Bootle parents temporarily out of the town; the corrected figure is therefore 1,652. Of the number registered 54 were illegitimate.

Still-births.—The number of still-births registered in the district was returned by the Registrar-General as 65; this figure corrected for 22 inward and 11 outward transfers gives a net total for the year of 76, as compared with 92 for 1932. As full an investigation as possible has been obtained in respect of each such case, and 28 of the foetuses were forwarded for pathological examination.

To obtain a complete picture of the true position as to infant mortality the still-births (which include deaths of infants both before birth and during the act of birth) should be added to the deaths of infants in their first twelve months of independent existence, and the following table is given with that end in view:—

Year.	Deaths of Infants.					
	Still Births.		Post-Natal.		Totals.	
	No.	Rate	No.	Rate	No	Rate
1926 ...	63	32	187	100	250	129
1927 ...	58	31	141	78	199	106
1928 ...	53	29	186	107	239	133
1929 ...	65	38	138	83	203	118
1930 ...	84	45	141	79	225	120
1931 ...	64	38	159	95	223	134
1932 ...	92	52	152	86	244	138
1933 ...	76	44	146	88	222	132

Infant Deaths.—There were 146 deaths of infants under the age of 12 months, which total expressed as a rate per 1,000 births gives an infant mortality rate of 88, compared with 86 during 1932.

The trend of infant mortality in recent years is set out in the table below:—

Years.	BOOTLE	England and Wales
1901-05	166	138
1906-10	130	117
1911-15	133	110
1916-20	103	91
1921-25	91	76
1926-30	89	68
1931	95	66
1932	86	65
1933	88	64

The highest infantile mortality was experienced in the first quarter of the year owing to the higher incidence of respiratory disease; the number of deaths then recorded was 41 as compared with 31, 40 and 33 respectively during the remaining quarters of the year.

The infantile mortality rate was uneven throughout the various Wards; the approximate rates were:—116 in Knowsley, 111 in Mersey, 101 in Stanley, 74 in Orrell, 72 in Linacre, and 57 in Derby.

The rate of infantile mortality amongst legitimate infants was 88 per 1,000 births and amongst illegitimate infants it was 129. In conformity with the usual experience the mortality rates for males were higher than those for females, both during the first four weeks and in the subsequent months. The most important of the causes of death, which are given in detail on page 70, were bronchitis and pneumonia 30; prematurity 34; diarrhoea and enteritis 25; congenital malformation 7; atrophy, debility, and marasmus 8; convulsions 13; whooping cough 7; and measles 6.

Infant Mortality in Lancashire County Boroughs.—The Medical Officers of Health of the other Lancashire County Boroughs have kindly supplied me with the information enabling me to compile the following list of infant mortality rates per 1,000 births during 1933:—

Town.	Infant Mortality Rate.	Town.	Infant Mortality Rate.
Bury	53	Bolton	79
Southport	57	Salford	81
Barrow-in-Furness..	64	Preston	87
Blackpool	67	BOOTLE	88
Warrington ...	70	Rochdale	89
Blackburn ...	71	Liverpool	98
Oldham	72	Wigan	110
Burnley	75	St. Helens ...	116
Manchester ...	75		

Neo-Natal Mortality.—Thirty-seven children died before they were a week old, and a total of 57, or 39·0 per cent. of all the deaths under one year, occurred in children under the age of one month. This is a neo-natal mortality rate of 34·5 per 1,000 births.

DEATH-RATES PER 1,000 BIRTHS, OF INFANTS UNDER FOUR WEEKS

Years.	BOOTLE.	ENGLAND AND WALES.
	Deaths per 1,000 Births.	Deaths per 1,000 Births.
1906—1910	37·0	40
1911—1915	39·2	39
1916—1920	32·3	37
1921—1925	34·2	33
1926—1930	32·7	32
1931	40·8	32
1932	32·8	32
1933	34·5	

Public Health (Ophthalmia Neonatorum) Regulations, 1926—Nine cases of ophthalmia neonatorum were notified during the year, compared with 14 in 1932 and 5 in 1931, the rates per 1,000 births being 5·4 for 1933, 7·9 for 1932, 3·0 for 1931, and 7·2 for 1930. The disposal of the cases and the results are shown in the table below:—

Cases.			Vision Unimpaired.	Vision Impaired.	Still under Treatment at end of year.	Total Blindness.	Deaths.
Notified.	Treated.						
	At Home.	In Hospital.					
9	6	3	9	—	—	—	—

No action under the Public Health Act, Section 66, for the prevention of blindness or for the treatment of persons suffering from disease or injury to the eyes has been taken other than a continuance of the arrangements already made with St. Paul's Eye Hospital, Liverpool, for the reception of new-born infants suffering from inflammation of the eyes, with their mothers.

Home Visitation of Infants.—There are seven officers on the health visiting staff, of whom one devotes her time to general clinic supervision and to certain special duties; two give half their time to tuberculosis visiting, and another gives one-quarter of her time to the School Medical Service; the establishment is, therefore, equivalent to $5\frac{3}{4}$ visitors giving their whole time to Maternity and Child Welfare duties.

This staff allowed on the average of the payment of four visits to each infant under one year, two visits each to infants in their second year, and one visit to each child between the age of two and five years. In all, 16,565 visits were paid, as compared with 16,654 during 1932.

Infant Welfare Clinics.—There are at present six Infant Consultations held weekly at two Centres. The number of new infants presented for examination and advice at such Centres during the year was 1,759, as compared with 1,424 during 1932, and 1,426 during 1931. Of these, 1,237 were infants under the age of one year, and 522 were over that age. The total attendances throughout the year numbered 22,936, compared with 22,963 during 1932. The average attendance at each meeting varied from 47 at the Thursday morning session at the School Medical Offices to 94 at the Wednesday afternoon session at the Health Centre.

Education in mothercraft, which is the prime function of the Infant Welfare Clinics, was continued during the year, and was extended by arranging for special talks to be given by the Health Visitors to groups of mothers at the Clinics held at the Health Centre; these talks formed part of a considered syllabus dealing with the principal points in infant hygiene.

YOUNG CHILD WELFARE.

During the year attention continued to be paid to children between the ages of one and five. There is a tendency to cease attendance at the Clinic when the child is weaned or begins to walk, and some of these children are seen perhaps six months later with pronounced rickets or malnutrition.

It must be realised that childhood does not consist of a series of well-marked stages such as teething, weaning, walking, and speaking. Development is continuous from the day of birth, and equally supervision should be continuous and attendance should be made at regular, although longer, intervals. Furthermore, it must be remembered that the decrease in infant mortality has a tendency to increase the sickness rate in children aged one to five years by saving many weakly infants who would not otherwise have survived. This is one explanation of the numbers of school entrants who show defects.

An examination on the lines of school medical inspection has again been offered to children within three months of their attaining three years of age. 235 children were examined, and amongst the findings the following points may be noted:—

Percentage with *good* nutrition ... 28·5 (1932—20 %)
,, ,, *poor* ,, ... 9·0 (1932—10 %)
,, ,, *average* ,, ... 62·5 (1931—70 %)

In 58 cases some signs of rickets were present (24·5 %); of these, 36 cases required treatment or supervision.

Advantage was taken of the facilities for treatment at the various specialist School Clinics; for example, 35 cases were seen by the Ophthalmic Surgeon, and glasses were ordered for 28 as a result of examination. Further, the help of the Liverpool Child Welfare Association was enlisted in providing tonics and convalescent treatment in special cases.

Incidence of Rickets.—An analysis has been made of the incidence of rickets as manifested at examinations made of 850 three-year-old children during the last four years, the slightest evidence of the presence of rickets leading to the case being included. It will be seen from the table below that the children fed for appreciable periods on condensed milk showed the highest incidence of rickets, and it may be added that this group contained the most severe of the cases; children breast-fed for too long a time (in some instances for fifteen months or more) were the group with the next highest incidence.

Method of Feeding.	Total	Rickets	Percentage
Breast-fed eight months and over	540	127	23·5
Mainly Dried Milk	130	18	14·0
Partly Breast-fed and Dried Milk	76	11	14·5
Partly Breast-fed and Fresh Milk	66	13	19·7
Mainly Sweetened Condensed Milk	38	17	45·0
	850	186	21·2

Convalescent Home Provision.—It has long been realised by public health workers and the medical profession generally that the respiratory diseases of childhood, in which may be included measles and whooping cough, are often followed by prolonged periods of disability during which there is increased susceptibility to tubercular infection, certainly of the lymphatic glands of the neck and chest and possibly of the lungs. Consequently provision has been made in the Maternity and Child Welfare Sub-Commitee's estimates for many years past for grants towards the cost of convalescent home treatment for such cases under the age of five years, although it has always been the experience that sufficient cases could not be secured to fill even the limited number of vacancies obtainable. The response of the public to the educative efforts of the medical officers and health visitors in this matter is slow, but there is little doubt that child health would be much improved by a readier acceptance of the position that measles, whooping cough and the pneumonias in young children may have serious consequences which can be averted by the routine of good food, open air, exercise, and rest, practised in the modern convalescent home.

Nurse Children.—The new powers in respect of the reception of children under the age of nine years for reward conferred on the Council by the coming into force of the Children and Young Persons Act, 1932, are administered through the Health Visitors, who supervised the general health and well-being of 14 such children who were on the register on 31st December last.

Boarded-out Children.—At the end of the year the same five children were on the Register of Children boarded out by the Council under Part VI. of the Public Assistance Order 1930, as at the end of 1931. All cases on the Register were visited at regular intervals by the School Nurses, who paid six visits to each during the year. The rules contained in the Order have been observed, and the reports on the homes and general conditions relating to the children have continued satisfactory throughout the year.

The Liverpool Child Welfare Association.—This Association has continued to send workers one morning each week to the School Medical Offices to facilitate the arrangements for dealing with recommendations of the medical staff of the Council or private doctors for the provision of surgical appliances, cod liver oil, extra nourishment, or convalescent home treatment, to infants and school children.

IX. HEALTH EDUCATION.

It was mentioned in the last Annual Report that the activities of the Merseyside Boroughs Health Education Committee had suffered curtailment owing to a reduction in the financial contributions of the Liverpool City Council, which was followed by proportionate reductions from the other constituent authorities. The joint committee received a further blow early in 1933 by the termination of the financial support of the Liverpool City Council; this action was copied by the other Authorities with the result that the Committee made no arrangements for health education during the year.

Health Education, however, was continued by the Council's medical and nursing staff, the former giving five lectures to various social and educational organisations, and the latter undertaking a series of health talks three times weekly to mothers in attendance at the clinics.

Further, advantage was taken of the scheme organised by the Central Council for Health Education for the regular supply and display on the poster-frames of the late Empire Marketing Board of designs from the various national organisations having special interests such as maternity and child welfare, tuberculosis, the milk supply, and venereal diseases.

X. NURSING ARRANGEMENTS, HOSPITALS AND OTHER INSTITUTIONS AVAILABLE FOR THE DISTRICT.

Professional Nursing in the Home.—The services of the Bootle District Nurses' Association are available for the nursing in their own homes of patients suffering from puerperal fever, measles, whooping cough, epidemic diarrhoea, ophthalmia neonatorum, pneumonia, and poliomyelitis; information as to cases requiring such attention is mainly derived from the health visiting staff, and the financial arrangements with the Association provide for payment by the Council of an annual retaining fee of £35, together with a charge of 8d. per visit in approved cases. The classification of such work by the District Nurses' Association follows:—

	Carried over from 1932	New Cases	Total	Total Visits	Transferred for treatment to Hospital	Died	Improved	Under treatment at end of 1933
Worms	—	47	47	406	—	—	47	—
Discharges from eyes..	1	22	23	329	—	—	21	2
Pneumonia	3	45	48	756	4	5	37	2
Measles	—	1	1	9	—	—	1	—
Diarrhoea	—	45	45	479	3	1	41	—
Tuberculosis	1	5	6	424	—	2	2	2
Whooping cough ...	1	—	1	23	—	—	1	—
Other diseases ...	—	14	14	225	—	2	12	—
	6	179	185	2651	7	10	162	6

Midwives.—Thirty-six midwives, excluding those practising in local municipal maternity homes, signified their intention to practise within the district during the year commencing 1st January 1933. Apart from the staff of the Municipal Maternity Home, there is no direct employment of or subsidy to practising midwives, although responsibility is accepted for the payment of the midwife's fee in such cases as are sanctioned by the Maternity and Child Welfare Sub-Committee after consideration of the patient's income, size of family, etc.

Hospitals.—The Bootle General Hospital (100 beds) is the only general hospital situate within the Borough boundary, but the Liverpool voluntary hospitals (both general and special) are also attended by Bootle residents.

Other institutional accommodation for the sick is obtained, as explained elsewhere in the Report, by agreement with the Liverpool City Council for reception into their institutions of sick persons, resident in the borough, for whom other provision is not at the time available.

Clinics and Treatment Centres.—The Clinics and Treatment Centres under the control of the Local Authority remain as described in the last Annual Report.

XI.—HOUSING.

Housing Progress during 1933.—During 1933 seventy-seven houses were erected under municipal housing schemes, and eighty-nine houses were erected by other bodies and persons. The table below demonstrates the progress made with new municipal housing provision during recent years:—

Number of houses completed during			1920 ...	26
,,	,,	,,	1921 ...	76
,,	,,	,,	1922 ...	200
,,	,,	,,	1923 ...	Nil.
,,	,,	,,	1924 ...	2
,,	,,	,,	1925 ...	98
,,	,,	,,	1926 ..	74
,,	,,	,,	1927 ...	182
,,	,,	,,	1928 ...	305
,,	,,	,,	1929 ...	346
,,	,,	,,	1930 ...	356
,,	,,	,,	1931 ...	286
,,	,,	,,	1932 ...	176
,,	,,	,,	1933 ...	77
				2204

The Housing Problem, General and Local.—Considered from the point of view of new houses required the housing question can be resolved into two parts—the clearance of insanitary areas, and the removal from individual houses of occupants in excess of a reasonable standard.

The relative importance of these two aspects of the problem varies in different areas, and a recent thorough re-examination of the position in this area, reported upon more fully below, demonstrated the non-existence at the present time of insanitary areas calling for clearance under the Housing Acts. The problem of overcrowding of individual houses, or the occupation by two or more families of houses designed for the use of one, is however extensive, and has constituted the justification for the new housing provision made by the municipality since 1920, and, moreover, remains the justification for the new housing provision to be made in the future. In this connection it may perhaps again be repeated that figures indicating a stationary population are irrelevant, since the operative factor in this aspect of housing needs is the increasing number of families in the area.

It is a source of satisfaction, therefore, that the Government recognise the general existence of this second aspect and further recognise that its relief cannot be expected by private action, but that

municipal provision aided by Exchequer subsidy is essential. The statement of Government policy in this regard indicated that the attack on overcrowding constituted a second stage, because of the difficulty of organising and starting at the same time the enormous amount of work that was involved in these two efforts.

One would suggest, however, that the corollary to this statement is the possibility and the desirability of an earlier application of this policy in districts such as this, where the former problem of insanitary areas is non-existent and the latter problem of overcrowding is especially pressing. In addition to the advantage to be derived by individual local authorities from such earlier relief of overcrowding there would be a longer spread-over of the Government's administrative and financial responsibilities in respect of the problem in its national application.

It would seem advisable that, before the second stage is formally embarked upon, a standard should be fixed by statute or bye-law as to what constitutes overcrowding, for at the present time Health Departments have to work to several standards. Thus, Bye-laws made in respect of sleeping apartments in Houses let in Lodgings and in Improvement Areas require 40 sq. feet of floor space for each person over 5 years of age and 30 sq. feet for each child under 5 years; the Housing Act, 1930, approves a house containing two bedrooms as providing accommodation for four persons, and a house containing three bedrooms as providing accommodation for five persons; while the Registrar-General for statistical purposes considers a dwelling to be overcrowded if the number of occupants exceeds two persons per room.

Existing Housing Needs.—A definition of overcrowding having been agreed upon it would seem necessary that an intensive review should be made of the whole area necessitating a house-to-house survey, in order that the Local Authority may be put in possession for the first time of exact information as to the number of families living in overcrowded conditions. Meanwhile, previous reports have suggested that the most reliable indication of housing needs at present available is furnished by a register of applicants for houses, and the position in this regard is that at March 1934 there were 947 unsatisfied applications from persons living in rooms registered as having been received before April 1933. Assuming that this register has a reasonable claim to be accepted it is suggested that no more elaborate survey is at present required, since the indicated need exceeds the number of houses which

can possibly be erected on land available within the Borough. A measure of its reliability is, moreover, obtainable from the Census reports of 1931, which showed that 682 occupied dwellings consisted of 1 to 3 rooms; of these there were 55 occupied by two families and 5 occupied by three or more families; and that of 9,422 dwellings consisting of 4 or 5 rooms there were 1,069 occupied by two families and 121 occupied by three or more families. Although no information was furnished as to the size of these 1,250 families there is, *prima facie*, reason to suspect that a large proportion of them were housed under unsuitable conditions.

Insanitary Areas and Unfit Houses.—Careful consideration was given to the question of action required to deal with insanitary areas and unfit houses following upon the issue of Circular 1331 by the Ministry of Health in April 1933. This Circular called for a programme of action to be taken in respect of what is commonly known as slum clearance during the ensuing five years, and this programme was to supersede a similar quinquennial scheme submitted in December 1930.

After consideration of special reports by the Medical Officer and an inspection of certain areas by its Housing Committee the Council directed in November 1933 that a return be submitted to the Ministry of Health showing that it was proposed to schedule no clearance areas, two improvement areas, and three individual houses for demolition.

On 18th December 1933 the Minister intimated his decision to hold a Local Enquiry in order to judge the adequacy of the proposals so submitted. The evidence of the Medical Officer at that enquiry was directed to show that continuously since the War the Local Authority and its officers had both informed themselves of the housing conditions of the Borough and had steadily pursued a policy of remedying such conditions as were unsatisfactory; the attention of the Minister was, therefore, drawn to the classification of insanitary property adopted in the 1918 Survey of Housing Needs, a classification admittedly made at a time of enthusiasm for reconstruction when standards were high, and records were presented of action taken in respect of each class of property. That action had included the demolition of six houses, the declaration of one area containing 83 houses as a Clearance Area, the declaration of an area of 36 houses as an Improvement Area, and steady progress year by year with routine inspection and repair work of working-class property in the Borough, the extent of which is indicated by the following tabular statement:—

Year.	Houses inspected and dealt with under Housing (Inspection of District) Regulations 1910.	Total number of houses inspected and dealt with for housing defects under Public Health or Housing Acts.
1920	189	2369
1921	593	2985
1922	240	3057
1923	79	1792
1924	27	2306
1925	3	2460
1926	3	2016
1927	—	2854
1928	107	2821
1929	—	2688
1930	36*	1849
1931	275*	2079
1932	247*	1913
1933	360*	2107

* Housing Consolidated Regulations 1925.

Moreover, as was mentioned above, the housing conditions in the Borough were formally examined in 1930, when a quinquennial statement dealing with a number of aspects of the housing question was submitted by the Council to the Ministry of Health, while in the months immediately following the receipt of Circular 1331 the position was again thoroughly reviewed. It was contended therefore that the Council was fully informed of housing conditions in the Borough, and was justified in submitting as adequate the programme which was made the subject of enquiry.

Howe Street Improvement Area.—The Bye-laws in respect of this Improvement Area approved by the Minister of Health in September 1932 have now been in operation for fifteen months, and during the year under review 144 inspections were made to see that these were being complied with; the structural alterations having been completed by the owners, it was possible to pay particular attention to those sections relating to overcrowding and the general care and cleanliness of the houses.

It is with satisfaction that one can report that the Bye-law on overcrowding was strictly observed, and that the standard of cleanliness and care of the property was a decided improvement on the conditions which prevailed before the Bye-laws came into operation.

Housing Act, 1930, *Sec.* 17.—During the year a total of 360 houses was inspected under the above Seetion, the property being distributed in Wards as follows:—Knowsley Ward 243, Mersey Ward 84, Stanley Ward 33.

In many eases the work earried out has been of an extensive nature and great improvements have been effeeted. This is notably the case in respeet of the whole of the houses on one side of Lineoln Street in which, in addition to re-conditioning, increased lighting has been obtained to staireases and landings, and the washboilers and sinks have been reeonstructed to provide better amenities for the tenants.

Considerable struetural alterations were effeeted at two blocks of houses in Sheridan Place, resulting in inereased light and ventilation to rooms at the rear of the properties.

Special mention may also be made of the extensive re-conditioning of fifty-seven houses in the area of Campbell Street, Summerseat, Tudno Street and Tudor Street.

In the quinquennial statement prepared in Deeember 1930 in compliance with the Housing Aet, 1930, it was stated that the estimated number of houses to be repaired under Section 17 within the next five years was 1,171, and the progress made in this regard by December 31st 1933 ean be summarised as follows:—

Number of houses inspected				882
,,	,,	,,	in respeet of whieh informal notices were served	833
,,	,,	,,	at which work was completed as a result of informal notice	580
,,	,,	,,	in respeet of which Statutory notiees were served	74
,,	,,	,,	at which work was eompleted as a result of Statutory notiees	74
,,	,,	,,	at which work was in progress ...	144
,,	,,	,,	at which work was not commeneed ...	80
,,	,,	,,	for which Demolition Orders made ...	4
,,	,,	,,	demolished	1

Houses Let in Lodgings—Continued attention has been paid to those houses of the larger type which readily lend themselves to the aeeommodation of three or more families, and during the year 60 houses were visited and a census taken of the oeeupants together with particulars of the amenities available for their use.

In 11 instances it was found that more than two families were in occupation and that the houses did not conform with the Bye-laws, and informal action was taken in each case to have the necessary requirements carried out.

As previously reported, experience showed that in practically every case the principal tenant was responsible for the sub-letting and that the owner was not disposed to incur expense in carrying out the structural alterations required. Instead, the owner negotiated with the principal tenant for the reduction of the number of families in each house to two, so that the Bye-laws did not apply.

In 6 of the 11 cases referred to above this method achieved what the owner desired, and in the remaining 5 cases statutory action is being taken to enforce compliance with the notices which had been served.

In addition to the primary inspections referred to above, 116 visits were made to houses previously inspected to see that overcrowding did not take place and that a reasonable standard of cleanliness was observed, and in no case was any contravention detected that was not rectified by a verbal warning.

The position on December 31st 1933 can be summarised as follows, the figures including those mentioned in the last Annual Report:—

Number of houses inspected	174
,, ,, ,, found to be Houses-let-in-Lodgings ...	59
,, ,, informal notices served	59
,, ,, notices complied with by carrying out the structural requirements	14
,, ,, notices complied with by reduction of number of families	40
Number still in abeyance	5

Pleasant View Clearance Area.—Successive Annual Reports since 1929 have recorded the steps taken to deal with the property comprised within the Pleasant View area, and the present position is that the valuation of the property to be acquired under the Compulsory

Purchase Order is nearing completion, and that sanction has been received for the erection of 60 houses on the Marsh Lane site to re-house the persons displaced from the first portion of the area to be cleared.

HOUSING STATISTICS.

I. *Inspection of Dwelling-houses during the Year.*

(1) (a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts) 2107

(b) Number of inspections made for the purpose 7173

(2) (a) Number of dwelling-houses (included under subhead (1) above) which were inspected, and recorded under the Housing Consolidated Regulations, 1925 360

(b) Number of inspections made for the purpose 5264

(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation 4

(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation 1836

II. *Remedy of Defects during the year without Service of formal Notices.*

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers 1283

III. *Action under Statutory Powers during the Year.*

A. Proceedings under Sections 17, 18 & 23 of the Housing Act, 1930—

(1) Number of dwelling-houses in respect of which notices were served requiring repairs 34

(2) Number of dwelling-houses which were rendered fit after service of formal notices—

(a) by owners 34

(b) by Local Authority in default of owners ... ... Nil

B. Proceedings under Public Health Acts—

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied 592

(2) Number of dwelling-houses in which the defects were remedied after service of formal notices—

(a) by owners 551

(b) by Local Authority in default of owners ... ... --

C. Proceedings under Sections 19 & 21 of the Housing Act, 1930—

(1) Number of dwelling-houses in respect of which Demolition Orders were made 1

(2) Number of dwelling-houses demolished in pursuance of Demolition Orders 1

D. Proceedings under section 20 of the Housing Act, 1930—

(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made ... ... Nil

(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit ... ... Nil

E. Proceedings under section 3 of the Housing Act, 1925—

(1) Number of dwelling-houses in respect of which notices were served requiring repairs ... ... Nil

(2) Number of dwelling-houses which were rendered fit after service of formal notices—

(a) by owners ... ... Nil

(b) by Local Authority in default of owners ... ... Nil

(3) Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declaration by owners of intention to close ... ... Nil

F. Proceedings under sections 11, 14 and 15 of the Housing Act, 1925—

(1) Number of dwelling-houses in respect of which Closing Orders were made ... ... Nil

(2) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit ... Nil

(3) Number of dwelling-houses in respect of which Demolition Orders were made ... ... Nil

(4) Number of dwelling-houses demolished in pursuance of Demolition Orders ... ... Nil

XII. BLIND WELFARE.

The administration of the scheme made by the Council on the passing of the Blind Persons Act, 1920, remained as described in the last Annual Report with the modification that certification was placed in the hands of one Ophthalmic Surgeon only. Dr. E. Allan, Ophthalmic Surgeon to the Education Committee, was appointed for this purpose, and undertook to give sessional attendance as required, and the opportunity was taken on the change over to commence a revision of the register, which included cases accepted from the Liverpool Workshops and Home Teaching Society when the obligation to provide for blind welfare originally passed to the Council. At the present time a revised scheme with regulations incidental thereto is under the consideration of the Council.

During the year 1933, 36 persons were considered for admission to the register of blind persons, and after examination 19 were accepted; in addition 3 transfer cases were added. Seven persons died, five removed from the area, and one was de-certified, leaving a total on the register at the end of 1933 of 142 persons as compared with 133 last year.

The age and sex classification of the 142 persons referred to is as follows:—

Age Group.	Males.	Females.	Total.
0—5 years	1	1	2
5—16 ,, ...	4	2	6
16—21 ,, ...	5	1	6
21—30 ,, ...	6	8	14
30—40 ,, ...	6	3	9
40—50 ,, ...	2	8	10
50—60 ,, ...	12	11	23
60—70 ,, ...	13	20	33
Over 70 years	17	22	39
Totals ...	66	76	142

A return furnished by the Home Teaching Society in February 1934 showed that they were then assisting 94 unemployable blind with money grants at a total weekly cost of £52 14s. 3d., the amount of relief being given varying from 2/6 to 25/- weekly, with the maximum amount of 25/- being paid in 5 cases. In addition one person was entered as undergoing training and seven as being employed at Blind Workshops. During the year 34 applications for the certification of blindness in order to take advantage of the Wireless Telegraphy (Blind Persons Facilities) Act, 1926, were granted.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1933 AND PREVIOUS YEARS.

Year.	Population estimated to middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths		Nett Deaths belonging to the District			
		Uncorrected Number.	Nett.						Under One Year of Age		At all Ages.	
			Number.	Rate.	Number.	Rate.*	of Non-residents registered in the District.	of Residents not registered in the District.	Number	Rate per 1,000 Nett Births	Number.	Rate
1	2	3	4	5	6	7	8	9	10	11	12	13
1914.	73,230	2,279	2,321	31·7	1,033	14·1	54	263	286	123	1,242	17·0
1915.	Civil 71,617 Total 74,285	2,023	2,050	27·6	1,054	14·7	62	294	292	142	1,286	17·9
1916.	Civil 71,135 Total 77,396	2,047	2,076	26·8	1,101	15·5	80	258	227	109	1,279	18·0
1917.	Civil 68,871 Total 76,772	1,853	1,873	24·4	1,023	14·1	91	281	187	99	1,213	17·6
1918.	Civil 73,500 Total 80,500	1,781	1,810	22·5	1,224	16·6	63	268	210	116	1,429	19·4
1919.	Civil 77,000 Total 80,500	1,860	1,914	23·9	988	12·7	79	245	184	96	1,154	15·0
1920.	80,029	2,285	2,289	28·6	1,000	12·5	59	195	223	97	1,136	14·2
1921.	76,487	2,142	2,068	27·0	817	10·7	43	236	198	96	1,010	13·2
1922.	76,518	2,144	2,051	26·8	877	11·5	42	258	164	80	1,093	14·3
1923.	76,549	2,159	1,999	26·1	858	11·2	50	262	170	85	1,070	14·0
1924.	76,581	2,078	1,942	25·4	799	10·4	59	226	192	99	966	12·6
1925.	76,612	2,077	1,943	25·4	820	10·7	53	324	188	97	1,091	14·2
1926.	76,643	1,958	1,865	24·3	730	9·5	36	311	187	100	1,005	13·1
1927.	76,674	1,916	1,817	23·7	734	9·6	39	339	141	78	1,034	13·5
1928.	76,705	1,793	1,746	22·8	703	9·2	48	379	186	107	1,033	13·5
1929.	76,737	1,668	1,660	21·6	713	9·3	34	414	138	83	1,093	14·2
1930.	76,768	1,774	1,793	23·4	608	7·9	61	394	141	79	941	12·3
1931.	77,160	1,709	1,667	21·6	731	9.5	55	464	159	95	1,149	14·8
1932.	77,260	1,711	1,768	22·9	638	8·3	48	437	152	86	1,027	13·3
1933	77,210	1,532	1,652	21·4	648	8·4	56	483	146	88	1,075	13·9

* These rates are based on the uncorrected numbers.
Area of District in acres (land and inland water)—1,947.

Appendix 2.

CASES OF INFECTIOUS DISEASES NOTIFIED DURING THE YEAR 1933.

Notifiable Diseases.	Number of Cases Notified.													Total Cases Notified in each Locality (e.g., Parish or Ward) of the District.					
	At all Ages.	At Ages—Years.												Derby Ward.	Stanley Ward.	Mersey Ward.	Knowsley Ward.	Linacre Ward.	Orrell Ward
		Under One year	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65	Over 65 yrs.						
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera-Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...
Diphtheria (including Membranous Croup)	156	2	4	4	10	21	67	25	9	12	1	1	...	24	7	31	33	23	38
Erysipelas	66	3	1	1	...	...	2	2	5	11	13	27	1	12	8	8	16	8	14
Scarlet Fever	625	7	26	31	47	46	267	122	33	32	8	6	...	112	45	63	108	92	205
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	8	1	...	...	...	...	...	1	3	1	2	..	...	2	...	1	1	2	2
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	..	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	3	...	...	...	...	...	...	...	...	3	...	..	..	1	...	...	...	...	2
Puerperal Pyrexia	45	...	...	...	...	...	...	...	2	36	6	1	...	10	3	7	8	9	8
Cerebro-spinal Meningitis	10	3	1	2	...	1	2	1	...	...	...	...	...	2	3	2	...	1	2
Poliomyelitis	3	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	1	2
Ophthalmia Neonatorum	9	9	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	2	3
*Infantile Diarrhœa	71	44	27	...	...	...	...	...	.	...	...	...	...	5	3	30	16	5	12
Influenzal Pneumonia	14	...	...	...	...	...	1	..	1	8	...	2	2	...	1	6	3	...	4
Acute Primary Pneumonia	267	25	39	24	17	10	42	7	10	37	18	27	11	37	19	47	35	35	94
Trench Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Malaria	1	...	...	...	...	...	...	...	...	...	...	1	..	...	..	...	..	...	1
Encephalitis Lethargica	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1279	95	98	62	74	78	383	158	64	140	48	65	14	207	89	196	222	178	387

* Voluntary notification of cases under the age of two years during July, August and September.

Isolation Hospital or Hospitals, Sanatoria, etc.:—Corporation Hospital, Linacre Lane, Bootle; Bootle Sanatorium, Maghull.

Appendix 8.

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR 1933.

Causes of Death.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "Non-Residents in Institutions' in the District
	All ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 & under 25 years.	25 & under 45 years.	45 & under 65 years.	65 and upward.	
All causes { Certified	1040	142	41	37	33	55	108	248	376	138
All causes { Uncertified	35	4	..	2	1	1	4	9	14	8
Enteric Fever	..	..	..	..	..	..	..	..	..	..
Small-pox	..	..	..	..	..	..	..	..	..	..
Measles	11	6	3	2	..	..	..	..	..	1
Scarlet Fever	2	..	1	..	1	..	..	..	..	3
Whooping Cough	13	7	5	1	..	..	..	..	..	..
Diphtheria and Croup	21	..	..	7	14	..	..	..	..	19
Influenza	19	..	..	..	..	..	2	7	10	..
Erysipelas	6	2	..	..	..	..	3	1	..	..
Phthisis (Pulmonary Tuberculosis)	103	..	..	2	1	28	38	27	7	18
Tuberculous Meningitis	4	..	2	..	2	..	..	..	..	1
Other Tuberculous Diseases	9	..	..	..	1	1	5	2	..	1
Cancer, malignant disease	89	..	..	1	..	1	4	46	37	8
Rheumatic Fever	2	..	..	1	1	..	..	..	..	..
Meningitis	11	5	1	3	1	1	..	..	..	..
Organic Heart Disease	132	..	..	..	1	4	3	31	93	1
Bronchitis	89	3	..	..	..	1	2	24	59	1
Pneumonia (all forms)	130	27	20	11	3	2	11	26	30	18
Other diseases of respiratory organs	17	..	..	..	..	2	2	6	7	3
Diarrhœa and Enteritis	36	25	8	1	..	..	..	..	2	3
Appendicitis and Typhlitis	..	..	..	..	..	..	..	..	..	1
Cirrhosis of Liver	..	..	..	..	..	..	..	..	..	..
Alcoholism	..	..	..	..	..	..	..	..	..	..
Nephritis and Bright's Disease	29	..	..	..	..	2	2	14	11	3
Puerperal Fever	2	..	..	..	..	..	2	..	..	..
Other accidents and diseases of Pregnancy and Parturition	4	..	..	..	..	..	4	..	..	1
Congenital Debility and Malformation, including Premature Birth	49	49	..	..	..	..	..	..	..	5
Violent Deaths, excluding Suicide	22	..	..	3	3	1	3	5	4	27
Suicide	4	..	..	..	..	..	2	1	1	2
Other Defined Diseases	265	22	1	7	6	10	28	64	127	27
Diseases ill-defined or unknown	6	..	..	..	..	..	1	2	2	3
Totals	1075	146	41	39	34	56	112	257	390	146

SUB-ENTRIES INCLUDED IN ABOVE FIGURES.

Cerebro-spinal Fever	2	1	1	..	..	..	..	..	..	..
Poliomyelitis	1	..	..	..	..	..	..	1	..	..
Broncho-pneumonia	72	21	18	8	1	..	3	9	12	10
Venereal Diseases	5	1	..	..	..	..	1	2	1	..
Cerebral Hæmorrhage	35	1	..	..	..	..	1	6	27	1
Arterio-Sclerosis	9	..	..	..	..	..	..	1	8	..
Senile Decay	22	..	..	..	..	..	..	1	21	..
Tetanus	..	..	..	..	..	..	..	..	..	..
General Paralysis of Insane	..	..	..	..	..	..	..	..	..	..
Aneurism	..	..	..	..	..	..	..	..	..	..
Locomotor Ataxy	..	..	..	..	..	..	..	..	..	..

INFANT MORTALITY.

1933. Nett Deaths from stated causes at various Ages under 1 Year of Age.

CAUSE OF DEATH.	Under 1 week.	1—2 weeks.	2—3 weeks.	3—4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months.	9 months and under 12 months.	Total Deaths under One Year.
All Causes { Certified	37	5	5	9	56	28	19	21	18	142
All Causes { Uncertified	—	—	—	1	1	1	1	1	—	4
Small-pox	—	—	—	—	—	—	—	—	—	—
Chicken-pox	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	1	—	4	1	6
Scarlet Fever	—	—	—	—	—	—	—	—	—	—
Whooping Cough	—	—	—	—	—	5	1	—	1	7
Diphtheria and Croup	—	—	—	—	—	—	—	—	—	—
Erysipelas	—	—	—	—	—	—	2	—	—	2
Tuberculous Meningitis	—	—	—	—	—	—	—	—	—	—
Abdominal Tuberculosis	—	—	—	—	—	—	—	—	—	—
Other Tuberculous Diseases	—	—	—	—	—	—	—	—	—	—
Meningitis (*not Tuberculous*)	—	—	—	—	—	1	—	1	3	5
Convulsions	4	—	—	3	7	3	2	1	—	13
Laryngitis	—	—	—	—	—	—	—	—	—	—
Bronchitis	—	—	1	—	1	—	—	2	—	3
Pneumonia (all forms)	—	—	2	1	3	7	3	5	9	27
Diarrhœa	—	—	—	—	—	1	1	1	—	3
Enteritis	—	—	—	1	1	3	7	8	3	22
Gastritis	—	—	—	—	—	—	—	—	—	—
Syphilis	—	—	—	—	—	1	—	—	—	1
Rickets	—	—	—	—	—	—	—	—	—	—
Suffocation, overlying	—	—	—	—	—	—	—	—	—	—
Injury at Birth	—	—	—	—	—	—	—	—	—	—
Atelectasis	2	1	—	—	3	—	—	—	—	3
Congenital Malformations	5	1	—	—	6	1	—	—	—	7
Premature Birth	22	2	1	4	29	5	—	—	—	34
Atrophy, Debility and Marasmus ..	1	—	1	1	3	—	4	—	1	8
Other Causes	3	1	—	—	4	1	—	—	—	5
Totals	37	5	5	10	57	29	20	22	18	146

Nett Births in the year { legitimate infants .. 1,598 / illegitimate infants... 54

Nett Deaths in the year { legitimate ... 140 / illegitimate... 6

APPENDIX 5.

Memo. 37/T. (Revised). Form T. 145.
First Schedule.

TUBERCULOSIS SCHEME.

RETURN FOR THE YEAR 1933.

(A) Return showing the work of the Dispensary (or Dispensaries).

Diagnosis.	Pulmonary.				Non-Pulmonary.				Total.				Grand Total.
	Adults		Children		Adults		Children		Adults		Children		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
A.—New Cases examined during the year (excluding contacts):—													
(a) Definitely tuberculous .	18	38	—	4	8	8	13	11	56	46	13	15	130
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	20	22	4	8	54
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	27	21	12	9	69
B.—Contacts examined during the year:—													
(a) Definitely tuberculous .	1	2	—	—	—	1	2	—	1	3	2	—	6
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	3	10	5	6	24
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	13	18	30	36	97
C.—Cases written off the Dispensary Register as:—													
(a) Recovered	1	8	1	2	1	1	8	3	2	9	9	5	25
(b) Non-tuberculous (including any such cases previously diagnosed and entered on the Dispensary Register as tuberculous)	—	—	—	—	—	—	—	—	54	54	51	49	208
D.—Number of Cases on Dispensary Register on December 31st:—													
(a) Definitely tuberculous .	229	153	15	22	25	41	67	55	254	194	82	77	607
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	20	25	7	14	66

1. Number of cases on Dispensary on January 1st	642	7. Number of consultations with medical practitioners:— (a) Personal	8
		(b) Other	144
2. Number of cases transferred from other areas and cases returned after discharge under Head 3 in previous years	11	8. Number of visits by Tuberculosis Officers to homes (including personal consultations)	18
3. Number of cases transferred to other areas, cases not desiring further assistance under the scheme, and cases "lost sight of"	45	9. Number of visits by Nurses or Health Visitors to homes for Dispensary purposes	1756
		10. Number of:— (a) Specimens of sputum, etc., examined	499
4. Cases written off during the year as Dead (all causes)	82	(b) X-ray examinations made ... in connection with Dispensary work	158
5. Number of attendances at the Dispensary (including Contacts) ...	6438	11. Number of "Recovered" cases restored to Dispensary Register, and included in A (a) and A (b) above	8
6. Number of Insured Persons under Domiciliary Treatment on the 31st December	158	12. Number of "T.B. plus" cases on Dispensary Register on December 31st	200

(B) Number of Dispensaries for the treatment of Tuberculosis (excluding centres used only for special forms of treatment).

Provided by the Council ... One Provided by Voluntary Bodies ... Nil

APPENDIX 5 *(continued)*.

(C) Number of beds available for the treatment of Tuberculosis on the 31st December in Institutions belonging to the Council.

Name of Institution	For Pulmonary Cases		For Non-Pulmonary Cases		Total
	Adults	Children under 15	Adults	Children under 15	
Linacre Hospital	28	..	...	...	28
Maghull Sanatorium	22	...	...	...	22

(D) Return showing the extent of Residential Treatment and Observation during the year in Institutions (other than Poor Law Institutions) approved for the treatment of Tuberculosis.

		In Institutions on Jan. 1st	Admitted during the year.	Discharged during the year.	Died in the Institutions.	In Institutions on Dec. 31st
Number of doubtfully tuberculous cases admitted for observation	Adult males	—	—	—	—	—
	Adult females	—	2	1	—	1
	Children	—	2	1	—	1
	Total	—	4	2	—	2
Number of definitely tuberculous patients admitted for treatment	Adult males	27	62	59	10	20
	Adult females	15	54	51	8	10
	Children	12	28	27	1	12
	Total	54	144	137	19	42
GRAND TOTAL		54	148	139	19	44

APPENDIX 5 (*continued*).

(E) Return showing the extent of Residential Treatment provided during the year in Poor Law Institutions for persons chargeable to the Council.

		In Institutions on Jan. 1.	Admitted during the year	Discharged during the year	Died in the Institutions.	In Institutions on Dec. 31.
Number of patients suffering from pulmonary tuberculosis admitted for treatment.	Adult males	8	44	22	22	8
	Adult females	—	24	17	4	3
	Children	2	8	6	1	3
	Total	10	76	45	27	14
Number of patients suffering from non-pulmonary tuberculosis admitted for treatment.	Adult males	6	6	7	2	3
	Adult females	3	8	5	2	4
	Children	5	14	7	3	9
	Total	14	28	19	7	16
GRAND TOTAL		24	104	64	34	30

(F) Return showing the results of observation of doubtfully tuberculous cases discharged during the year from Institutions approved for the treatment of Tuberculosis.

Diagnosis on discharge from observation	For Pulmonary Tuberculosis						For Non-Pulmonary Tuberculosis						Totals		
	Stay under 4 weeks			Stay over 4 weeks			Stay under 4 weeks			Stay over 4 weeks					
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
Tuberculosis...	...	..	...	...	1	...	...	...	...	...	..	...	...	1	...
Non-Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Doubtful ...	...	...	...		...	1	..	...	...	...	...	...	...	.	1
Totals	...	.	...	...	1	1	...	...	...	...	...	...	...	1	1

(G) Return showing the immediate results of treatment of definitely tuberculous patients discharged during the year from Institutions approved for the treatment of Tuberculosis.

Classification on admission to the Institution.	Condition at time of Discharge.	Duration of Residential Treatment in the Institution																Grand Totals.
		Under 3 months.			3—6 months.			6—12 months.			More than 12 months.			Totals.			
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
PULMONARY TUBERCULOSIS.																		
Class T.B. minus.	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Not Quiescent	2	4	—	3	5	—	3	1	2	—	—	—	8	10	2	20	
	Died in Institution	1	2	—	1	—	—	—	—	—	—	—	—	2	2	—	4	
Class T.B. + Group 1.	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Not Quiescent	1	4	—	4	3	—	—	—	2	—	—	—	5	7	2	14	
	Died in Institution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Class T.B. + Group 2.	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Not Quiescent	9	8	1	10	6	—	4	4	—	3	—	—	26	18	1	45	
	Died in Institution	1	3	—	1	—	—	—	—	—	—	—	—	2	3	—	5	
Class T.B. + Group 3.	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Not Quiescent	4	6	—	6	2	1	3	—	—	1	—	—	14	8	1	23	
	Died in Institution	3	2	—	1	—	—	—	—	—	1	—	—	5	2	—	7	
	TOTALS (Pulmonary) ...	21	29	1	26	16	1	10	5	4	5	—	—	62	50	6	118	

Non-Pulmonary Tuberculosis.	Bones & Joints.	Quiescent	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1
		Not Quiescent	2	1	3	—	1	4	—	1	—	1	—	—	3	3	7	13
		Died in Institution	—	—	—	—	—	—	1	—	—	—	—	1	1	—	1	2
	Abdominal.	Quiescent	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	1
		Not Quiescent	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	1
		Died in Institution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Other Organs.	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Not Quiescent	2	1	—	—	1	—	—	—	—	—	—	—	2	2	—	4
		Died in Institution	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	1
	Peripheral Glands.	Quiescent	—	—	—	—	—	1	—	—	1	—	—	—	—	—	2	2
		Not Quiescent	1	2	6	—	—	3	—	—	1	—	—	—	1	2	10	13
		Died in Institution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Totals (Non-Pulmonary) ...		5	5	9	—	3	9	1	1	2	1	—	2	7	9	22	38

APPENDIX 6.

TUBERCULOSIS SCHEME.—

Supplementary Annual Return showing in summary form (a) the condition and (b) the reasons for the removal of all cases written off the Register. first entered on the Dispensary Register as definite cases of

Condition at the time of the last record made during the year to which the return relates.			Previous to 1926.					1926.					1927.					1928.				
				Class T.B. plus					Class T.B. plus					Class T.B. plus					Class T.B. plus			
			Class T.B. minus	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus)	Class T.B. minus	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus)	Class T.B. minus	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus)	Class T.B. minus	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus)
(a) Remaining on Dispensary Register on 31st December.	Disease Arrested.	Adults M.	7	2	1	—	3	—	—	2	—	2	1	—	—	—	—	1	—	1	—	1
		Adults F.	10	1	—	—	1	1	—	—	—	—	1	—	—	—	—	3	—	—	—	—
		Children	1	—	—	—	—	1	—	—	—	—	2	—	—	—	—	3	—	—	—	—
	Disease not Arrested.	Adults M.	17	11	15	3	29	1	—	3	1	4	6	3	2	—	5	3	5	2	2	9
		Adults F.	8	1	4	1	6	—	—	1	—	1	3	—	1	—	1	3	1	1	—	2
		Children	2	—	1	—	1	1	—	—	—	—	—	—	—	—	—	4	—	—	—	—
	Condition not ascertained during the year.		5	—	1	1	2	—	—	—	—	—	—	—	1	—	1	3	—	2	—	2
	Total on Dispensary Register at 31st December.		50	15	22	5	42	4	—	6	1	7	13	3	4	—	7	20	6	6	2	14
(b) Not now on Dispensary Register and reasons for removal therefrom.	Discharged as Recovered.	Adults M.	Total of both classes				18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Adults F.					33	3	—	—	—	—	1	—	—	—	—	1	—	—	—	—
		Children					27	2	—	—	—	—	1	—	—	—	—	—	—	—	—	—
	Lost sight of, or otherwise removed from Dispensary Register.						165	21	1	8	1	10	14	4	5	2	11	15	2	8	1	11
	Dead.	Adults M.					85	12	1	11	16	28	5	2	6	10	18	9	3	13	12	28
		Adults F.					46	10	1	5	9	15	2	—	9	11	20	8	—	10	4	14
		Children					4	3	—	—	1	1	1	—	—	3	3	2	1	—	1	2
	Totals written off Dispensary Register.						378	51	3	24	27	54	24	6	20	26	52	35	6	31	18	55
Grand Totals							470	55	3	30	28	61	37	9	24	26	59	55	12	37	20	69

Form T. 145a

PULMONARY TUBERCULOSIS.

at the end of 1933 of all patients remaining on the Dispensary Register; The Table is arranged according to the years in which the patients were pulmonary tuberculosis, and their classification at that time.

1929.					1930.					1931.					1932.					1933.				
	Class T.B. plus					Class T.B. plus					Class T.B. plus					Class T.B. plus					Class T.B. plus			
Class T.B. minus	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus)	Class T.B. minus	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus)	Class T.B. minus	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus)	Class T.B. minus	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus)	Class T.B. minus	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus)
2	—	—	—	—	1	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	1	—	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	3	3	—	6	6	—	9	1	10	13	4	8	1	13	6	1	13	2	16	17	2	15	10	27
2	—	4	—	4	7	—	6	—	6	12	2	7	1	10	8	1	8	2	11	20	6	7	3	16
1	—	—	—	—	2	—	1	—	1	6	—	—	—	—	3	1	—	—	1	2	1	1	1	3
3	—	—	—	—	1	1	—	1	2	3	—	—	—	—	3	—	2	—	2	—	—	—	—	—
17	3	8	—	11	20	1	17	2	20	36	6	15	2	23	20	3	23	4	30	39	9	23	14	46
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	3	6	2	11	8	1	4	5	10	9	1	2	3	6	5	—	2	2	4	2	2	—	—	2
8	2	16	8	26	8	—	9	11	20	7	—	8	15	23	3	—	4	7	11	1	—	1	7	8
5	2	3	6	11	4	—	9	6	15	4	—	5	6	11	4	—	1	12	13	1	—	2	4	6
1	1	1	1	3	—	—	—	2	2	4	—	—	2	2	—	—	1	—	1	—	—	—	—	—
23	8	26	17	51	20	1	22	24	47	24	1	15	26	42	12	—	8	21	29	4	2	3	11	16
40	11	34	17	62	40	2	39	26	67	60	7	30	28	65	32	3	31	25	59	43	11	26	25	62

APPENDIX 6 (*continued*).

TUBERCULOSIS SCHEME.—

Supplementary Annual Return showing in summary form (a) the condition (b) the reasons for the removal of

Condition at the time of the last record made during the year to which the return relates.			Previous to 1926.					1926.					1927.					1928.				
			Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.
(a) Remaining on Dispensary Register on 31st December.	Disease Arrested. Adults	M.	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		F.	—	—	1	—	1	—	—	—	—	—	1	—	—	—	1	1	—	—	2	3
	Children		5	—	1	7	13	—	—	—	—	—	1	—	—	—	1	1	—	—	2	3
	Disease not Arrested. Adults	M.	—	—	—	1	1	—	—	—	1	1	1	—	—	—	1	—	—	—	1	1
		F.	—	—	1	—	1	—	—	—	1	1	—	—	—	1	1	—	—	—	—	—
	Children		4	—	1	2	7	1	—	—	—	1	3	—	—	—	3	1	—	1	1	3
	Condition not ascertained during the year.		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total on Dispensary Register at 31st December.		9	—	5	10	24	1	—	—	2	3	6	—	—	1	7	3	—	1	6	10
Transferred to Pulmonary			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(b) Not now on Dispensary Register and reasons for removal therefrom.	Discharged as Recovered. Adults	M.					6	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—
		F.					6	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—
	Children						49	—	9	—	13	22	—	—	—	6	6	1	3	—	7	11
	Lost sight of, or otherwise removed from Dispensary Register.						101	2	1	4	16	23	4	4	1	5	14	—	1	—	5	6
	Dead. Adults	M.					4	—	—	1	—	1	—	—	—	—	—	—	—	1	—	1
		F.					2	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1
	Children						5	3	1	2	1	7	—	—	—	1	1	1	—	—	—	1
	Totals written off Dispensary Register.						173	5	11	7	34	57	4	4	1	12	21	3	4	1	12	20
Grand Totals of (a) and (b) (excluding those transferred to Pulmonary)							197	6	11	7	36	60	10	4	1	13	28	6	4	2	18	30

NON-PULMONARY TUBERCULOSIS.

at the end of 1933 of all patients remaining on the Dispensary Register; and all cases written off the Register.

1929.					1930.					1931.					1932.					1933.				
Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints	Abdominal	Other Organs.	Peripheral Glands.	Total.
—	—	—	1	1	—	—	—	1	1	1	1	—	—	2	—	—	—	—	—	—	—	—	—	—
2	1	—	1	4	1	—	—	—	1	2	—	—	2	4	—	1	—	1	2	—	—	—	2	2
—	—	—	4	4	2	1	1	5	9	3	5	—	11	19	3	1	—	10	14	—	1	1	6	8
—	—	—	—	—	—	—	1	—	1	—	—	—	1	1	2	—	—	—	2	4	1	1	3	9
3	—	1	—	4	—	—	—	—	—	—	—	2	—	2	3	—	1	1	5	2	2	—	3	7
—	—	—	—	—	2	—	—	2	4	1	—	1	2	4	3	—	—	5	8	8	1	—	11	20
—	—	—	1	1	1	—	—	—	1	1	—	—	2	3	—	—	—	1	1	—	—	—	—	—
3	1	1	7	14	6	1	2	8	17	8	6	3	18	35	11	2	1	18	32	14	5	2	25	46
—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	1	—	2	4	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	2	2	—	5	—	—	—	2	2	1	3	1	3	8	—	—	—	—	—	1	—	—	1	2
1	—	—	—	1	1	—	—	—	1	—	—	—	—	—	2	—	—	—	2	—	—	—	—	—
—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	1	1	—	2	—	1	1	—	2
1	—	—	—	1	1	1	1	1	4	1	1	—	2	4	3	—	—	—	3	—	—	—	—	—
4	3	2	4	13	2	1	2	5	10	2	4	1	5	12	5	1	1	—	7	1	1	1	1	4
9	4	3	11	27	8	2	4	13	27	10	10	4	23	47	16	3	2	18	39	15	6	3	26	50

APPENDIX 7.

Form T. 137/1933.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1930.

PART I.—Summary of Notifications during the period from the 1st January 1933, to the 31st December, 1933, in the area of the County Borough of Bootle.

AGE-PERIODS	Formal Notifications: Number of Primary Notifications of new cases of Tuberculosis. 0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards	Total (all ages)	Total Notifications
Pulmonary, Males ...	...	...	1	1	7	11	20	22	13	19	2	96	122
,, Females ..	...	...	3	6	12	19	20	4	7	4	2	77	95
Non-pulmonary, Males ..	1	7	8	4	4	...	3	1	1	...	...	29	42
,, ,, Females ..	1	6	6	3	3	1	6	2	2	1	2	33	41

SUPPLEMENTAL RETURN.

PART II.—New cases of Tuberculosis coming to the knowledge of the Medical Officer of Health during the above-mentioned period, otherwise than by formal notification.

AGE PERIODS	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards	Total Cases
Pulmonary Males	...	...	...	...	...	...	1	1	3	1	...	6
,, Females	...	..	1	...	...	2	1	1	1	...	1	7
Non-pulmonary Males ...	...		1	...		...	...	...	...	...	...	1
,, Females ...	...	...	...	1	...	1	...	...	...	...	..	2

The source or sources from which information as to the above-mentioned cases was obtained is stated below:—

Source of Information	No. of Cases.	
	Pulmonary.	Non-Pulmonary.
Death Returns—From Local Registrars	3	...
,, ,, Transferable Deaths from Registrar-General...	2	...
Posthumous notifications	...	...
"Transfers" from other areas (other than transferable deaths)	7	3
Other sources, if any (specify)—	1	...

Part III. NOTIFICATION REGISTER.

	Pulmonary.			Non-Pulmonary.			Total Cases
	Males	Females	Total	Males	Females	Total	
Number of cases of Tuberculosis remaining at the 31st December 1933, on the Registers of Notifications kept by the Medical Officer of Health of the County Borough	326	262	588	139	146	285	873
Number of cases *removed* from the Register during the year by reason *inter alia* of—							
1. Withdrawal of notification	...	...	.	...	.	...	...
2. Recovery from the disease ...	2	11	13	8	4	12	25
3. Death	71	40	111	7	11	18	129

APPENDIX 8.

SUMMARY OF WORK DONE BY SANITARY INSPECTORS.

NUISANCES—

No. of complaints made by inhabitants	1820
No. of complaints confirmed	1606
No. of nuisances discovered on above complaints	4433
No. of nuisances discovered excluding on complaint	1267
No. of re-inspections of nuisances	14403
No. of special visits and miscellaneous visits	1778
No. of informal notices served	2224
No. of statutory notices served	626
Matters referred to the Borough Engineer	221
Matters referred to the Water Engineer, Liverpool	73
Matters referred to the Housing Manager	107

Notices to owners—

Accumulations	63
Choked and defective drains	309
Choked and defective downspouts and raingutters	147
Defective roofs	542
Defective yard surfaces	227
Defective water pipes	73
Defective water closets	960
Defective ashbins	155
Miscellaneous	3174

Notices served on occupiers of houses—

Dirty conditions	25
Removal of fowl and other animals	5
Accumulations	18
Choked drains	2

Notices served on occupiers of food premises—

Offensive accumulations	4
Dirty condition of premises or fittings	23
No receptacles for refuse	1
Defective floors	2
Defective storage	2
Defective sanitary fittings	7
Miscellaneous	11

PLACES OF PUBLIC ENTERTAINMENT—

There are 6 buildings used for public entertainment in the town. There were 47 visits of inspection.

HOUSING ACTS—

Howe Street Improvement Area—Re-inspections	141
Housing Act, 1930, Section 17—	
Number of houses inspected	360
Informal notices served	311
Informal notices complied with	320
Number of houses where work is in progress at end of year	144
Statutory notices served	34
Statutory notices complied with	34
Number of inspections and re-inspections made	5264

HOUSES LET IN LODGINGS—

Number of houses visited	60
Number found to be houses let in lodgings	11
Number of informal notices served	11
Number of informal notices complied with	6
Number of re-inspections made	116

COMMON LODGING HOUSES—

No. registered under the Public Health Act, 1875	4
No. of inspections	81
No. of informations laid in respect of infringements	—

CANAL BOATS—

No. of inspections and re-inspections of canal boats	107
,, infringements re certificates	1
,, other defects	14
,, notices sent in respect of same	7
,, defects or infringements where necessary work was done without service of notice	8

STEPS TAKEN TO PREVENT NUISANCE FROM SMOKE—

No. of observations made	53
,, intimations sent	7
,, notices served in respect of excessive black smoke	—
,, informations laid	—
Amount of fines and costs	—

DAIRIES, COWSHEDS, AND MILKSHOPS—

No. of cowkeepers and dairymen resident in the borough on register	18
,, milk purveyors (not cowkeepers) resident in the borough on register	83
,, milk purveyors resident outside the borough on register	27
,, premises registered as cowsheds or dairies or milkshops	67
,, inspections made—Cowsheds 140, dairies and milkshops 317	457

PIGGERIES—

No. of visits made	105

STABLES—

No. of visits made	84

RATS AND MICE (DESTRUCTION) ACT—

No. of visits made re infestation	162

FOOD INSPECTION—

No. of visits to butchers' shops	841
,, ,, fishmongers' shops	159
,, ,, fried fish shops	99
,, ,, dining rooms and kitchens	38
,, ,, grocers' shops	119
,, ,, fruiterers	230
,, ,, cold stores	9
,, ,, ice cream premises	112
,, ,, respecting observation of Merchandise Marks Act	331

SUMMARY OF LEGAL PROCEEDINGS—

Food and Drugs (Adulteration) Act, 1928	1
Milk and Dairies (Consolidation) Act, 1915	1

DISINFECTION : INFECTIOUS DISEASES--

No. of houses disinfected after notifiable infectious diseases	715
,, houses disinfected after pulmonary tuberculosis	168
,, houses disinfected after other diseases	10
,, visits made to infected houses	845
,, re-visits made to infected houses	164
,, houses cleaned in default of or at request of owners	36
,, houses disinfected for verminous conditions	13

All houses assessed at £15 per annum or less are cleaned after infectious disease (i.e., the walls stripped and the ceilings whitened) by the Corporation at their own cost; in cases of pulmonary tuberculosis the Corporation strip, when necessary, whatever the rent.

LIST OF ARTICLES DISINFECTED—

Paillasses	219
Mattresses	9
Beds	587
Bolsters and Pillows	1792
Blankets	1585
Quilts	991
Sheets	902
Carpets	6
Hearthrugs	18
Wearing Apparel	2683
Miscellaneous Articles	299
	9091

The figures in the table do not include the ambulance bedding (one bed, one pillow, and three blankets), which is disinfected after the removal of each case.

Two hundred and twenty-eight books were disinfected.

One hundred and twenty-five articles were destroyed at the request of the owners.

FLUSHING.

The flushing gang consists of two Corporation workmen and a Liverpool waterman.

No. of private houses at which drains were flushed	10317
No. of passage sewers flushed	479

Drains were flushed at public buildings 29 times.

The drains at the Bootle General Hospital, the Bootle Hospital Nurses' Home, the Bootle Maternity Home (51, Balliol Road), and the Liverpool Maternity Home in Hawthorne Road, were each flushed 12 times during the year; at the Health Centre, 7 times; and at Linacre Hospital twice during the year.

The amount of water used during the year was 2,300,650 gallons.

FACTORY AND WORKSHOP ACT.

WORKSHOPS AND WORKPLACES (excluding Bakehouses)—

No. on register	96
No. of visits and re-visits	332
,, workrooms with dirty walls or ceilings	5
,, ,, ,, lavatories	2
,, ,, ,, floors	5
,, ,, not properly ventilated	—
,, ,, found overcrowded	—
,, defective drains and water closets	6
,, miscellaneous defects found	7
,, notices issued to occupiers	19
,, notices issued to owners	6
,, notices complied with	25
,, references to the Factory Inspector	—
,, ,, ,, Borough Engineer	1

FACTORIES—

No. of visits and re-visits	188
No. with insufficient or unsuitable sanitary accommodation	1
No. of defective yard surfaces	1
,, defective drains and water closets	5
,, offensive accumulations	7
,, miscellaneous defects found	17
,, defects remedied	31

BAKEHOUSES—

No. on register	19
No. of visits and re-visits	76
,, bakehouses found dirty (walls and ceilings and floors)	12
,, notices issued for limewashing	12
,, notices issued for miscellaneous defects	3
,, bakehouses taken off the register during the year	—
,, bakehouses added to the register during the year	1

CONFECTIONERY BAKEHOUSES—

No. on register at end of year	21
No. taken off register during the year	1
No. added to register during the year	—
No. of visits and re-visits	70
No. found dirty (walls and ceilings and floors)	9
No. of notices issued for limewashing	9
,, ,, ,, miscellaneous defects	2

OUTWORKERS—

No. of outworkers on register at end of year	4
,, visits and re-visits made to houses of outworkers	10
,, notices served for sanitary defects at houses of outworkers	—
Outworkers employed in Bootle for Liverpool firms engaged in—	
Making wearing apparel	4
Outworker employed in Litherland for Bootle firm:—	
Hosiery	1

APPENDIX 9.

FOOD AND DRUGS (ADULTERATION) ACT, 1928.

SAMPLES TAKEN DURING THE YEAR 1933.

Nature of Article.	Total.	Number of Samples taken for Analysis.		Number found Adulterated.		Percentage Adulterated	
		Informal	Formal	Informal	Formal	Informal	Formal
Milk	126	54	72	3	6	5·55	8·33
Condensed Milk	9	9	...	...	...	.	...
Cream	6	6	...	...	...	...	...
Butter	16	16	...	...	...	...	...
Margarine	14	14	...	...	...	...	...
Tea	5	5	...	...	...	...	...
Cheese	10	10	...	...	...	...	...
Rice	7	7	...	...	...	.	...
Cocoa	4	4	...	...	...	...	...
Sausage	3	3	...	2	...	66·66	...
Lard	8	8	...	...	...	...	...
Coffee	3	3	...	...	...	...	...
Pepper	2	2	...	...	...	...	...
Dripping	5	5	...	...	...	...	...
Tapioca	1	1	...	...	...	...	...
Self-raising Flour	5	5	...	...	...	...	...
Salmon Paste	1	1	...	...	...	...	...
Dried Fruit	1	1	...	...	...	...	...
Sweets	2	2	.	...	...	...	...
Jam	7	7	...	...	...	. .	...
Mineral Water	3	3	...	...	...	...	. .
Pearl Barley	2	2	...	...	.	..	...
Totals	240	168	72	5	6	2·97	8·33

APPENDIX 10.

THE PUBLIC HEALTH (PRESERVATIVES IN FOOD) REGULATIONS, 1925-1927.

Year 1933.

Nature of Article.	Number of samples examined for presence of preservative.	Number of samples found correct.
Milk	126	126
Cream	6	6
Condensed Milk	9	9
Butter	16	16
Margarine	14	14
Sausages	3	1
Dried Fruit	1	1
Salmon Paste	1	1
Sweets	2	2
Jam	7	7
Mineral Water	3	3
Pearl Barley	1	1
Tapioca	1	1
Totals ...	190	188

APPENDIX 11.

RETURN relating to all persons who were treated at the TREATMENT CENTRE at BOOTLE GENERAL HOSPITAL during the year ended the 31st December 1933.

	Syphilis.		Soft Chancre.		Gonorrhœa		Conditions other than venereal.		Totals.		
	M.	F.	M	F.	M.	F.	M.	F.	M.	F.	Totals.
1. Number of cases on 1st January under treatment or observation.	113	36	2	—	242	36	11	—	368	72	440
2. Number of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection	14	2	—	—	15	—	—	—	29	2	31
3. Number of cases dealt with for the first time during the year under report (exclusive of cases under Item 4) suffering from:											
Syphilis, primary	23	1	—	—	—	—	—	—	23	1	24
,, secondary	6	4	—	—	—	—	—	—	6	4	10
,, latent in 1st year of infection ...	4	—	—	—	—	—	—	—	4	—	4
,, all later stages ...	9	5	—	—	—	—	—	—	9	5	14
,, congenital	1	5	—	—	—	—	—	—	1	5	6
Soft Chancre	—	—	10	—	—	—	—	—	10	—	10
Gonorrhœa, 1st year of infection	—	—	—	—	125	22	—	—	125	22	147
Gonorrhœa, later	—	—	—	—	20	4	—	—	20	4	24
Conditions other than venereal	—	—	—	—	—	—	52	15	52	15	67
4. Number of cases dealt with for the first time during the year under report known to have received treatment at other Centres for the same infection.	8	—	1	—	10	—	—	—	19	—	19
TOTALS OF ITEMS 1, 2, 3 & 4.	178	53	13	—	412	62	63	15	666	130	796
5. Number of cases discharged after completion of treatment and final tests of cure (see Item 15)	10	2	8	—	20	6	46	15	84	23	107
6. Number of cases which ceased to attend before completion of treatment and were, on first attendance, suffering from:—											
Syphilis, primary	10	—	—	—	—	—	—	—	10	—	10
,, secondary	5	3	—	—	—	—	—	—	5	3	8
,, latent in 1st year of infection ...	6	—	—	—	—	—	—	—	6	—	6
,, all later stages ...	18	3	—	—	—	—	—	—	18	3	21
,, congenital	—	1	—	—	—	—	—	—	—	1	1
Soft Chancre	—	—	—	—	—	—	—	—	—	—	—
Gonorrhœa, 1st year of infection	—	—	—	—	75	13	—	—	75	13	88
Gonorrhœa, later	—	—	—	—	19	4	—	—	19	4	23
7. Number of cases which ceased to attend after completion of treatment but before final tests of cure (see Item 15)	29	8	—	—	63	5	—	—	92	13	105
8. Number of cases transferred to other centres or to institutions, or to care of private practitioners	10	3	2	—	31	1	—	—	43	4	47
9. Number of cases remaining under treatment or observation on 31st December	90	33	3	—	204	33	17	—	4	66	380
TOTALS OF ITEMS 5, 6, 7, 8 & 9.	178	53	13	—	412	62	63	15	666	130	796

(These totals should agree with those of Items 1, 2, 3 and 4)

APPENDIX 11 (*continued*).

	Syphilis. M.	Syphilis. F.	Soft Chancre. M.	Soft Chancre. F.	Gonorrhoea. M.	Gonorrhoea. F.	Conditions other than venereal. M.	Conditions other than venereal. F.	Totals. M.	Totals. F.	Totals. Totals.
10. Number of cases in the following stages of syphilis included in Item 6 which failed to complete one course of treatment:											
Syphilis, primary	8	—	—	—	—	—	—	—	8	—	8
,, secondary	1	3	—	—	—	—	—	—	1	3	4
,, latent in 1st year of infection ...	2	—	—	—	—	—	—	—	2	—	2
,, all later stages ...	10	3	—	—	—	—	—	—	10	3	13
,, congenital	—	1	—	—	—	—	—	—	—	1	1
11. Number of attendances:—											
(a) for individual attention of the medical officers ...	3297	500	165	—	7510	531	231	22	11203	1053	12256
(b) for intermediate treatment, e.g., irrigation, dressing ...	—	—	—	—	3270	243	—	—	3270	243	3513
	3297	500	165	—	10780	774	231	22	14473	1296	15769
12. In-patients:—											
(a) Total number of persons admitted for treatment during the year	2	2	1	—	4	5	—	—	7	7	14
(b) Aggregate number of "in-patient days" of treatment given	150	98	15	—	126	180	—	-	291	278	569

	Under 1 year. M.	Under 1 year. F.	1 and under 5 years. M.	1 and under 5 years. F.	5 and under 15 years. M.	5 and under 15 years. F.	15 years and over. M.	15 years and over. F.	Totals. M.	Totals. F.
. Number of cases of congenital syphilis in Item 3 above classified according to age periods ...	—	2	—	—	1	3	—	—	1	5

	Arsenobenzine Compounds.	Mercury.	Bismuth.
14. Chief preparations used in treatment of syphilis:—			
(a) Names of preparations ...	Males—Neo-Kharsivan Kharsulphan Females—Neo-Kharsivan Sulpharsenol		Males— Bismuth Metal Females—Bisglugol
(b) Total number of injections given (out-patients and in-patients)	Males 1012 Females 155	—	Males 1309 Females 91
(c) Number of injections included in (b) given to patients who on first attendance at this Centre were suffering from primary and secondary syphilis.	Males 272 Females 63	—	Males 183 Females 38

15. Are the tests recommended in Memo. V21 as amended by Memo. V21A followed in deciding as to the discharge of the patient after treatment and observation for syphilis and gonorrhoea? ... ... If not, in what way are they modified?	Yes as far as possible, but as a large proportion of the patients are of the seafaring type, it is not always practicable to carry the tests out to a definite conclusion.

APPENDIX II (*continued*).

	Microscopical		Serum Tests		
	for spirochetes.	for gonococci.	Wassermann.	Others for Syphilis.	for Gonorrhoea.
16. Pathological Work:—					
(a) Number of specimens examined at and by the medical officer of the treatment centre	—	256	—	—	—
(b) Number of specimens from patients attending at the centre sent for examination to an approved laboratory	—	61	174	—	—

Statement showing the services rendered at the Treatment Centre during the year, classified according to the areas in which the patients resided.

	Bootle.	Liverpool.	Lancashire.	Various.	Total
A. Number of cases in Items 3 and 4 from each area found to be suffering from :—					
Syphilis	27	7	16	16	66
Soft Chancre	2	2	3	4	11
Gonorrhoea	92	18	32	39	181
Conditions other than venereal	29	11	22	5	67
TOTAL ...	150	38	73	64	325
B. Total number of attendances of all patients residing in each area	8664	2425	4208	472	15769
C. Aggregate number of "In-patient days" of all patients residing in each area	239	—	261	69	569
D. Number of doses of arsenobenzene compounds given in the out-patient Clinic and In-patient Department to patients residing in each area	559	174	403	31	1167

W. L. WEBB, M.B., Ch.B.,

6th February 1934. *Medical Officer of the Treatment Centre.*

APPENDIX 12.

VENEREAL DISEASES

Annual Return of Pathological Examinations made during the year ended on the 31st December, 1933.

At the University of Liverpool—

For detection of spirochaetes—For Treatment Centre	... ...	—
For Practitioners	... ...	—
For detection of gonococci—For Treatment Centre	... ...	128
For Practitioners	... ...	4
For Wassermann reaction—For Treatment Centre	... ...	400
For Practitioners	... ...	29

APPENDIX 13.

WORK DONE BY THE WELFARE VISITORS.

Total visits paid	16515
First visits to infants	1589
Routine visits to infants	4632
Visits to children, aged 1 to 2 years	3214
Visits to children, aged 2 to 5 years	3606
First visits to expectant mothers	493
Routine visits to expectant mothers	677
Ophthalmia Neonatorum—First Visits	9
,, ,, Routine visits	20
Special visits to cases of Diarrhoea	46
,, ,, Measles	115
Visits re Still-births	50
Visits re deaths from Cancer	49
,, cases of Pneumonia	113

APPENDIX 14.

ANTE-NATAL CLINICS.

JANUARY 1st, 1933, to DECEMBER 31st, 1933.

Number of times Clinics opened	202
Number of attendances made	4424
Number of new cases	855
Number of patients under supervision at end of 1932	197
Normal labour	399
Stillbirth	11
Miscarriage	17
Difficult labour	27
Not Pregnant	39
Left the district	33
Post Natal Cases	10
Referred to Hospital or Maternity Home (including 7 of Caesarian Section) ...	294
Number under supervision at end of 1933	222
Wassermann—	
Positive	1
Negative	6
Smears taken for Gonococci—	
Positive	4
Negative	1

APPENDIX 15.

RETURN OF DEFECTS FOUND IN 291 CHILDREN EXAMINED AT THREE YEARS OF AGE IN 1933.

Defect.	Total.	Ref. for Treatment or Observation.	Defect.	Total.	Ref. for Treatment or Observation.
Malnutrition	21	18	Nervous System—		
Uncleanliness	14	7	Functional disorders ..	10	10
			Respiratory System—		
			Bronchial Catarrh ...	8	6
Skin—			Bronchitis	2	2
Impetigo	8	8	Cough	3	3
Other conditions ...	8	8			
			Tuberculosis—		
Eyes—			Glands of Neck ...	1	1
Blepharitis	5	5			
Conjunctivitis ...	1	1			
Squint	13	12	Digestive System—		
			Gastro-Enteritis ...	4	4
			Threadworms ...	11	11
Ears—			Constipation	4	4
Otorrhoea	15	15	Anorexia	3	3
Earache	1	1			
			Genito-Urinary system—		
Mouth—			Phimosis	2	2
Dental Caries (4 or more)	16	7	Vaginitis	1	1
Pyorrhoea	1	1	Undescended testicles .	2	2
Stomatitis	2	2	Enuresis	1	1
			Other defects—		
Nose and Throat—			Congenital Syphilis ...	1	1
Enlarged Tonsils ...	3	3	Defective Speech ...	2	2
Adenoids	3	2	Rickets	58	36
Tonsils and Adenoids.	9	8	Flat Feet	2	2
Mouth Breathing ...	6	5	Hernia	3	3
Nasal Catarrh ...	7	7	Mumps	1	1
Tonsillitis	1	1	Thyroid Deficiency ...	1	1
Enlarged cervical glands	22	13	Debility	1	1
			Rheumatism	1	1
			Torticollis	1	1
			Scalds	1	1
Circulatory System—					
Anaemia	8	8			
Functional cardiac defects	3	3		291	235

RETURN to be made on or before the 9th of February, 1934, by Mr. R. W. Jackson, Vaccination Officer of the Bootle Sub-District of the West Derby Registration District, respecting the Vaccination of Children whose Births were registered from 1st January to 31st December, 1932, inclusive.

Registration Sub-Districts comprised in the Vaccination Officer's District.	Number of Births returned in the "Births List Sheets" as registered from 1st Jan., to 31st Dec., 1932.	Number of these Births duly entered by 31st January, 1934, in Columns I., II., IV. and V. of the "Vaccination Register" (Birth List Sheets), viz.:					Number of these Births which on 31st January, 1934, remained unentered in the "Vaccination Register" on account (as shown by "Report Book") of			Number of these Births remaining on 31st January, 1934, neither duly entered in the "Vaccination Register" (columns 3, 4, 5, 6 and 7 of this Return) nor temporarily accounted for in the "Report Book" (columns 8, 9 and 10 of this Return.	*Total number of Certificates of Successful Primary Vaccination of Children under 14 received during the Calendar Year 1933.	Number of Statutory Declarations of Conscientious Objection received by the Vaccination Officer irrespective of the dates of birth of the children to which they relate, during the Calendar Year 1933.
		Col. I. Successfully Vaccinated.	Col. II. Insusceptible of Vaccination.	Col. II. Had Small Pox.	Col. IV. Number in respect of whom Statutory Declarations of Conscientious Objection have been received.	Col. V. Died Unvaccinated.	Postponement by Medical Certificate.	Removal to Districts the Vaccination Officers of which have been duly apprised.	Removal to places unknown, or which cannot be reached, and Cases not having been found.			
1	2	3	4	5	6	7	8	9	10	11	12 These figures are to be obtained from columns 2 and 6 of the Summary (Form N.).	13
BOOTLE ...	1711	1328	38	—	211	72	7	17	24	14	1530	190
Total ...	1711	1328	38	—	211	72	7	17	24	14	1530	190

7th February, 1934.

R. W. JACKSON, *Vaccination Officer.*

NOTE.—The total of the figures in columns 3 to 11 should agree with the figure in column 2. Any cases of children successfully vaccinated after the declaration of conscientious objection had been made should be included in column 6 above and not in column 3. The number of such cases should be inserted here:—Nil.

*The total in this column should be the number of Certificates of successful primary vaccination of children under 14, actually received during the year, including any relating to births registered in previous years. The total thus given should include the Certificates of successful primary vaccination, of which copies have been sent to Vaccination Officers of other Districts. The total number of Certificates for the year 1933 sent to other Vaccination Officers should be stated here:—324.

LINACRE HOSPITAL.—Revised Diagnoses and Complications.

SCARLET FEVER ADMISSIONS.	Bootle	Litherland	Formby
Re-diagnosed as :—			
Scarlet fever and chickenpox ...	3	—	—
,, ,, diphtheria ...	1	1	—
,, ,, measles	—	1	—
,, ,, mitral stenosis ..	1	—	—
,, ,, mumps	—	1	—
,, ,, burns	—	1	—
Arthritis	1	—	—
Albuminuria	1	—	—
Erythema	3	1	1
Bronchitis	1	—	—
Febricula	3	—	—
Fracture of Elbow	1	—	—
Lobar Pneumonia	2	1	—
Measles	3	—	—
Tonsillitis	8	—	—
Totals	28	6	1

DIPHTHERIA ADMISSIONS.	Bootle	Litherland	Formby
Re-diagnosed as :—			
Diphtheria and mumps	1	—	—
,, ,, pneumonia	1	—	—
Bronchitis	1	—	—
Diabetes mellitus	1	—	—
Laryngismus stridulus	1	—	—
Laryngitis	5	1	1
Impetigo	1	—	—
Measles	1	—	—
Mumps	1	—	—
Mitral Disease	1	—	—
No disease found	3	—	—
Pneumonia	1	—	—
Quinsy	4	1	—
Scarlet fever	7	3	—
Tonsillitis	31	7	—
Vincent's angina		—	—
Totals	61	12	1

APPENDIX 18.

METEOROLOGICAL DATA FOR 1933.

Supplied by the Liverpool Observatory and Tidal Institute.

Month	Mean Barometer.	Mean Temperature.	Rainfall.	Mean Cloud.
January ...	30·082 ins.	37·9°	1·189 ins.	5·7
February ...	29·947 ins.	40·6°	2·693 ins.	6·3
March	29·853 ins.	45·4°	1·909 ins.	5·6
April	30·092 ins.	47·5°	0·878 ins.	6·3
May	29·974 ins.	52·1°	1·724 ins.	6·9
June	29·884 ins	58·7°	2·146 ins.	5·9
July	30·021 ins.	62·0°	1·335 ins.	5·9
August ...	30·038 ins.	62·4°	1·785 ins	5·9
September ...	30·085 ins.	59·1°	0·831 ins.	5·0
October ...	29·907 ins.	50·9°	3·638 ins.	7·2
November ...	29·965 ins.	43·3°	1·299 ins.	6·9
December ...	30·199 ins.	36·1°	0·579 ins.	6·6
Year	30·004 ins.	49·7°	20·006 ins.	6·2

APPENDIX 19.

LOCAL POWERS RELATING TO PUBLIC HEALTH

(1) Acts of Parliament adopted by the Council.	Dates provisions became operative
Infectious Disease (Notification) Act, 1889	8 April, 1891
Infectious Disease (Prevention) Act, 1890, sections 4, 5, 6, 14, 16, 17, 18, 20, 21	11 Oct., 1893
Public Health Acts Amendment Act 1890, Part III.	11 Oct., 1893
Infectious Disease (Prevention) Act, 1890, section 15	5 Sept., 1900
Public Health Acts Amendment Act, 1907, Section 95	11 Dec., 1908
Public Health Acts Amendment Act, 1907, Sections 22, 23, 24, 33, 35, 44, 50, 51, 52, 53, 54, 55, 57, 61, 62, 63, 64, 65, 69, 70, 71, 72, 73, 74, 75	20 Feb., 1915
Public Health Act, 1925, Sections 13, 14, 15, 16, 17, 18, 19, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, 37, 39, 40, 41, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54 and 55	1 Dec., 1926

(2) Bootle Corporation Acts and Orders—	
Bootle Corporation Act, 1890	1 Sept., 1890
Bootle Order, 1897; confirmed by the Local Government Board's Provisional Orders Confirmation (No. 16) Act, 1897, relative to Sanitary Improvements	24 Mar., 1897
Bootle Corporation Act, 1899	8 Aug., 1899
Bootle Corporation Act, 1905	9 Nov., 1905
Bootle Order, 1914; confirmed by the Local Government Board's Provisional Orders Confirmation (No. 6) Act, 1914, relating to the substitution of moveable ashpits for fixed ashpits	13 Mar., 1914
Bootle Corporation Act, 1920	31 Mar., 1921
Bootle Order, 1927; confirmed by the Ministry of Health's Provisional Orders Confirmation (No 4) Act, 1927, relating to the substitution of ashbins for ashpits	24 Mar., 1927
Bootle Corporation Act, 1930	1 Aug., 1930

(3) Bye-Laws and Regulations in Force in the Borough—	
Nuisances, 1887	7 Nov., 1887
Slaughter Houses, 1887	26 May, 1887
Common Lodging Houses, 1894	25 June, 1894
Carriage of Offensive Matter through Streets, 1898	26 July, 1898
Hospitals provided by the Corporation, 1904	10 June, 1904
New Streets and Buildings, 1927	31 Oct., 1927
Smoke Abatement Bye-laws, 1930	15 Dec., 1930
Houses let in Lodgings, or occupied by members of more than one family	19 May, 1931
Nursing Homes	10 Dec., 1931
New Buildings	21 April, 1932
Howe Street Improvement Area	21 Sept., 1932